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ABSTRACT

Discipline and misbehavior in American high schools are the focus of this analysis of data from the first wave (1980) of a longitudinal study of over 30,000 sophomores and over 28,000 seniors. A summary of the findings shows that differences between urban and other schools are usually statistically insignificant when other school and student characteristics are controlled. Catholic schools have the best behaved student bodies, followed by other private schools and public schools. Schools with better behavior records have a stable faculty, assign more homework, discipline misbehaving students, and enforce more rules. The analysis chapters interpret the data by (1) presenting the perceptions of students and the evaluations of school administrators of the problems caused by student misbehavior; (2) describing the association between misbehavior and student characteristics and exploring the complex relationships among misbehavior, course grades, hours spent on homework, and educational expectations; (3) showing the way in which levels of misbehavior vary with characteristics of schools; (4) comparing administrators' reports about rule enforcement with students' perceptions and analyzing the association between levels of discipline in the school and rates of misbehavior. (Author/MLF)

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Contractor Report

Discipline, Order and Student Behavior in American High Schools

National Center for
Education Statistics

EA 015 224

Discipline and Order in American High Schools

National Opinion Research Center

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November 1981

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PREFACE

The data and analyses presented in this report are from the first (1980) wave of the National Center for Education Statistics study, High School and Beyond, a longitudinal study of U.S. high school seniors and sophomores. This study was conducted for NCES by the National Opinion Research Center at the University of Chicago.

A detailed report on sample design and sampling errors, High School and Beyond: Sample Design Report, is available, so the sample will be described only briefly here. The sample was a two-stage stratified probability sample with schools within a stratum drawn with a probability proportional to their size. Once a school was selected, up to 36 sophomores and 36 seniors were drawn randomly from the students enrolled in each selected school.

Several special strata were included in the sample design. Schools in these special strata were selected with probabilities higher than those for schools in regular strata to allow for special study of certain types of schools or students. The following kinds of schools were oversampled:

- Public schools with high proportions of Hispanic (Cuban, Puerto Rican, and Mexican) students.
- Catholic schools with high proportions of minority group students.
- Public alternative schools.
- Private schools with high proportions of National Merit Scholarship finalists.

Substitutions were made for noncooperating schools in those strata where it was possible. Out of 1,122 possible schools, students at 1,015 schools and school administrators from 988 schools filled out questionnaires.

In many schools the actual number of seniors and sophomores was less than the target number for several reasons. First, in some schools fewer than the number 36 sophomores or 36 seniors were enrolled. This reduced the number of eligible students from 73,080 (72 students in each of 1,015 schools) to 70,704. Second, 8,278 students were absent on the survey date. Third, 1,982 students, or in some cases their parents, declined to participate, exercising their right in a voluntary survey. Substitutions were not made for non-cooperating students. Finally, 2,174 cases were deleted because they contained only very incomplete information. Thus, data are available for 30,030 sophomores and 28,240 seniors. This represents a completion rate of 82 percent: 58,270 out of the 70,704 eligible students. In addition to the students in the regular sample, data were collected from friends and twins of participating students.

Weights were calculated to reflect differential probabilities of sample selection and to adjust for nonresponse. Using appropriate weights yields estimates for high school sophomores and seniors in the United States and separate estimates for schools or students classified in various ways, such as by geographical region or school type.

Information of several sorts was obtained in the survey. Students completed questionnaires of about one hour in length, and took a battery of tests with a total testing time of about one and one-half hours. School officials completed questionnaires covering items of information about the schools. A sample of parents of sophomores and seniors (about 3,600 for each cohort) was surveyed primarily for information on financing of post-secondary education. Finally, teachers gave their perceptions of specified characteristics of students in the sample whom they had had in class, to provide information beyond the students' own reports about themselves.

This report is one of several analyzing High School and Beyond base year survey data. The study was designed to be relevant both to many policy issues and to many fundamental questions concerning youth development and educational institutions. It is intended to be analyzed by a wide range of users, from those with immediate policy concerns to those with interests in more fundamental or long-range questions.

As succeeding waves of data on a subsample of these students become available (at approximately two-year intervals), the richness of the dataset, and the scope of questions that can be studied through it, will expand. In addition, use of the data in conjunction with NCES's study of the cohort of 1972 seniors (also available from NCES), for which data at five time points are now available, enriches the set of questions that can be studied.

The data are available on computer tape for a nominal fee from:

Statistical Information Office
National Center for Education Statistics
1001 Presidential Building
400 Maryland Avenue, SW
Washington, D.C. 20202
Phone: (202) 436-7900

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The design of HIGH SCHOOL AND BEYOND was initially developed by the Longitudinal Studies Branch of the National Center for Education Statistics. Edith M. Huddleston, NCES project officer for HIGH SCHOOL AND BEYOND, and William B. Fetters, mathematical statistician, have guided this project since its inception, and have been responsible for many aspects of the research design. The current NCES project officer is Samuel S. Peng.

A study of this scope and magnitude would not have been possible without the active cooperation of many persons at various levels of educational administration: Chief State School Officers, Catholic Archdioceses and other private school organizations, principals and teachers in the schools, and of course, the students and their parents. The expertise, support, and persuasiveness of numerous study coordinators at participating schools was especially critical to the successful conduct of the study. Those who will use these data for the study of American education are deeply indebted to all these people.

A second debt is owed to all those people on the field and project staff of HIGH SCHOOL AND BEYOND, whose efforts brought into being the data that will make possible the study of issues involving young people and their schools, data on which the present report is based.

Special thanks are due to members of the National Planning Committee, who have been active in advising NCES on the design, implementation, and uses of the study: Ellis B. Page, Chairman (Duke University), Robert F. Boruch (Northwestern University), Bruce K. Eckland (University of North Carolina, Chapel Hill), Barbara Heyns (New York University), David S. Mundel (Employment and Economic Policy Administration, City of Boston), Robert C. Nichols (State University of New York, Buffalo), Sally B. Pancrazio (Illinois Office of Education), and David E. Wiley (Northwestern University).

The National Opinion Research Center (NORC), under the direction of NCES, took responsibility for the remainder of the design and conducted the base-year survey; NORC's preliminary analysis of the base year data contributed to the development of this publication. James S. Coleman served as Principal Investigator at NORC, with Carol B. Stocking as Project Director. Other contributing NORC staff members were Fansayde Calloway, who directed field work for the project, and Antoinette Delk, Larry Dornacker, Martin Frankel, and Natalie Suter.

Michelle Gates provided valuable assistance during the preparation of this report. Her computer work, text editing, and construction of tables are greatly appreciated. Harry Gallaher's assistance with computer work is also appreciated. Katherine Ewing gave many helpful insights during the course of this project. Other members of the NORC research staff, particularly the authors of the other reports, also provided many helpful suggestions at various times during the development of this report.

Finally, the contributions of editors Susan Campbell and Nora Schaeffer, and the Data and Word Processing staffs at NORC are obvious. The craftsmanship and dedication of the Word Processing staff deserve special mention.

SUMMARY OF MAJOR FINDINGS

The Distribution of Misbehavior by Student Characteristics

- Seniors have poorer attendance records than sophomores, whether attendance is measured by absenteeism, tardiness, or class-cutting. Compared to seniors, sophomores are less likely to do at least some of their assigned homework, and they are more likely to report that they have been in serious trouble with the law.

- Males are more likely than females to misbehave. The size of the sex difference in levels of misbehavior depends on the activity: differences in attendance at class are small compared with differences in doing assigned homework or in the likelihood of having been in serious trouble with the law.

- Students from middle-income families generally have lower rates of misbehavior than do students from low- or high-income families. The relationship between income and behavior is weak, however.

- The association between misbehavior and academic performance is, in contrast, fairly strong. Students who do poorly in school have much higher rates of misbehavior than do students who do well.

- Hispanic students have poorer conduct than either blacks or whites. Black sophomores misbehave somewhat more than white sophomores; black seniors misbehave somewhat less than white seniors.

- Students living in families with both parents or guardians in residence have better behavior records than other students.

- Compared to other students, students whose parents almost always know where they are and what they are doing have much better conduct in school and are much less likely to be delinquent outside of school. Students who report that neither parent keeps close track of how well they are doing in school have worse behavior than students who report that their parents monitor their schoolwork.

- Sophomores who misbehave have lower educational expectations than those who do not, even when compared to sophomores whose educational expectations before high school were identical.

The Distribution of Misbehavior by School Characteristics

- Rates of misbehavior vary by geographic region. Generally speaking, schools from the Western part of the country have the highest rates of misbehavior, and schools from the North and South Central sections have the lowest rates. The ordering of regions by levels of misbehavior changes somewhat with the introduction of controls, but the general pattern remains the same.

- Urban schools have somewhat more misbehavior than suburban or rural schools, but the differences are not consistent across all types of misbehavior and the differences are usually statistically insignificant when other school and student characteristics are controlled for.

- Catholic schools have the best-behaved student bodies, followed by other private schools and public schools. The differences between types of schools remain even when other characteristics of the school and the student body are controlled for.

- When other characteristics of high schools are controlled for, school enrollment is not an important predictor of student reports of their own misbehavior, except in the case of class-cutting. However, students perceive misbehavior as more frequent in large than small schools.

- When other characteristics of high schools are controlled for, the relative number of white students and students of other races in the school has no independent effect on student self-reports of most types of misbehavior. Levels of tardiness, however, are lowest in schools that are racially homogeneous. Furthermore, students in schools that have very high or very low proportions of white students often perceive their schools to have less misbehavior than do students in less racially homogeneous schools when comparisons control for other characteristics of the high school.

- Schools with a more stable faculty have lower levels of misbehavior.
- Schools that assign more homework also have better-behaved student bodies than schools that assign less homework.

The Relationship Between Discipline, Misbehavior, and School Characteristics

- Students who reported that they had misbehaved were more likely than other students to report that they had been disciplined by the school. When we controlled for the level of misbehavior of sample sophomores, schools with larger proportions of sophomores reporting that they had been disciplined usually had lower levels of misbehavior in the senior classes than did other schools.
- Holding constant the number of students who reported that they had misbehaved, students in Catholic schools were more likely than students in other types of schools to report that they had been disciplined by the school.
- High schools in the Western part of the country on the average had lower ratios of the number of sophomores disciplined to the number who had misbehaved than schools in other parts of the country.

Students' Perceptions of School Discipline

- Sophomores in schools with a high ratio of students disciplined to students who had misbehaved were more likely to think that disciplinary procedures in their school were effective than were sophomores in schools where this ratio was low. This ratio was not, however, associated with sophomores' evaluations of the fairness of discipline at their school.
- Catholic and other private school students were more likely than public school students to think that discipline was effectively administered

in their high schools. The relationship between type of school and perception of the fairness of discipline, however, was moderately weak.

. Compared to sophomores in schools with other racial mixes, sophomores in high schools with roughly equal numbers of white students and students of other races were least likely to feel that disciplinary procedures in their school were either fair or effective.

. Other things being equal, sophomores from higher income families were more likely than those from lower income families to feel that discipline in their school was ineffective and unfair.

. In the presence of statistical controls, sophomores rated effectiveness of discipline higher in schools where the rates of misbehavior were lower. However, the partial correlations between the perceived fairness of discipline and levels of misbehavior, controlling for school and student body characteristics were not significantly different from zero.

. With school and student body characteristics controlled for, the percentage of sophomores who felt that disciplinary procedures were unfair increased with the percentage who perceived that certain rules of conduct were enforced. The relationship between the perception that school grounds were closed at lunch and the perception of unfairness of discipline was the strongest. There was essentially no relationship between sophomores' perception of the effectiveness of discipline and their perception that school rules are enforced.

The Accuracy of Students' and School Administrators' Perceptions of School Problems

. Student and administrator perceptions of different types of misbehavior are sometimes inconsistent with the students' reports about their own misbehavior. Sophomores in large high schools perceive attendance problems to be worse than students' self-reports of misbehavior would warrant. Students in Catholic and other private schools overestimate levels of general attendence relative to their reported level of attendence.

Rule Enforcement, Rule Perception, and Misbehavior

- Almost all high schools indicated that they enforced a rule that held students liable for property damage at the school. A large majority also enforced "no smoking" rules and required students to carry hall passes. A little over half had dress codes, and slightly fewer than 40 percent of the schools said that they closed school grounds during lunch.

- Compared to schools whose administrators reported that few rules were enforced, high schools that enforced more rules had lower rates of misbehavior reported by their students. The relationship was stronger for the sophomore than the senior class. When other characteristics of the school were controlled for the association diminished considerably, but the relationship between sophomore behavior and the number of rules enforced persisted.

- Sophomore assessments about the enforcement of rules of conduct by the school often did not agree with the statements of the school administrator. Given that a school administrator had said that a particular school rule was enforced, sophomores were more likely to perceive that the rule was enforced in Catholic and other private schools than in public schools. Students in large schools were more likely than students in small schools to agree with school administrators that rules governing student movement in the school were enforced.

- Given that a school administrator said that a particular rule was enforced, the rule was more often perceived to be enforced by sophomores in schools with low levels of misbehavior than in schools with high levels of misbehavior. The correlation between the percentage of sophomores in a school perceiving that a rule was enforced and levels of misbehavior in the school persisted even when many characteristics of the school and the student body were controlled for.

CHAPTER 1

INTRODUCTION

During the past fifteen years, high schools in the United States have had to suffer the onset of two humbling afflictions more or less simultaneously. After a brief period of time during which the schools were looked upon by Americans as their salvation from technological domination by the Soviet Union, the support of public and political leaders faded along with their sense of crisis. This crisis for the nation was all too quickly followed by a crisis for the nation's schools, as social, economic, and cultural changes beyond their control made it increasingly difficult for them to maintain academic standards at earlier levels. Declining scores on standardized tests became a focus of concern. At almost the same time reports began to circulate through the mass media that schools were not only failing to preserve their previous levels of achievement but also that the social climate of too many of the country's schools seemed to be deteriorating. Scholars and parents had traditionally seen the classroom as a place for the infusion of values as well as knowledge. Suddenly, it seemed that the moral mission of education was also in jeopardy.

During the 1970s, a certain amount of evidence accumulated suggesting that the decay of social order in educational institutions has been arrested (NIE, 1977). A stabilization of school disruption at unacceptable levels has not, of course, been received with cheer. Given the importance of the socializing function that society has delegated to the schools, and the possibility that the low levels of academic achievement and high levels of misbehavior in schools are related, interest in information about the problem and policies that might improve the situation has remained high.

1.1 Theoretical Perceptives on Misbehavior in High Schools

Strictly speaking, misbehavior in high school, which can mean absenteeism, class-cutting, or the disobedience of teacher directives, is not the same thing as delinquency, which is usually construed to mean criminal activity such as assault, robbery, and drug use. But the two types of activity are strongly related. In both cases, adolescents are violating rules which are designed by authorities to control their behavior. In both cases the community accepts the legitimacy of these rules. It is to be expected, therefore, that analyses of misbehavior within the high school and of the more general phenomenon of juvenile delinquency would focus on similar issues. This report is not the appropriate forum for an exhaustive discussion of the theoretical issues involved. However, a brief statement of the theoretical context can serve as a useful orientation to the empirical results presented later in this report.

Social scientists have employed three somewhat overlapping theoretical orientations to understand juvenile delinquency. These are often referred to as strain, social control, and delinquent subcultural approaches to the study of delinquency. (See Kornhauser (1978) for the most recent attempt to explain and compare these perspectives in depth.) Scholars using the social control perspective often emphasize the institutional ties between the the community and the individual. They stress that an individual must be taught the norms and values of a community. The extent to which he or she internalizes these norms and values and acts in conformity with them depends upon the adequacy of his or her socialization. It also depends on the extent to which the person's activities are structured by a network of ties to institutions that can reinforce belief in and commitment to these norms and values. The family, the school, and other community institutions play a part in this socialization. A child who is not sufficiently tied to families and other institutions that can carry out this socialization is less likely to internalize institutional norms and therefore is more likely to violate them.

Strain theories focus on inconsistencies between the distribution in a society of personal goals which are learned through socialization and thus culturally derived, and the distribution of the legitimate means to obtain these goals. Merton (1968), in his classic formulation of this thesis, argued that the goal of material success was so strongly ingrained in the culture of the United States that many more people aspire to success than can obtain it with the legitimate means at their disposal. The lack of congruence in the distribution of means and ends creates frustration among those who lack the means to achieve material success. These individuals must either adopt a more realistic set of goals, or employ different means to achieve material success. Merton argued that neither resolution is accepted as fully legitimate by our society. Individuals who revise their goals downward often adopt a ritualistic stance toward their work. Their labor is relatively unproductive. White collar criminals, who employ illegimate means in order to achieve greater material success, provide the most striking example of another major solution. Merton went on to argue that in extreme cases some individuals would reject both legitimate means and legitimate ends, leading either to social withdrawal or extremist political activity.

This general argument about the causes of what Merton called an anomic social structure was adopted by several scholars, notably Cohen (1955) and Cloward and Ohlin (1960) as the basis for an explanation of juvenile delinquency. Cohen argued that youth who are unlikely to achieve material success as adults because they lack necessary resources will be motivated to substitute achievable goals which can serve as gratification in the short term. These goals, and the means to achieve them, are elaborated in the peer group. Because disadvantaged youth are frustrated and angered by their poor chances to obtain rewards from school and work and thereby achieve respect in the community, the goals they turn to are explicit repudiations of dominant values. Achievement of these goals often requires activity that is conventionally labelled delinquent. Cohen, among others, has described the set of goals, norms, symbols, and values that characterizes the life of delinquent peer groups as a delinquent subculture. The development, internalization, and employment of these alternative goals, norms, symbols and values are often elements of subcultural explanations for delinquency, though in fact they can be found in a variety of theoretical perspectives, as the work of Thrasher (1927), Stinchcombe (1964), Cohen (1955), Coleman (1963), and Short and Strodtbeck (1965) make clear.

All three types of theories focus empirical attention on characteristics of the individual's family background, academic potential, and academic orientation. From the perspective of strain theories, family background and academic potential in large part determine the chances that an individual will achieve material success, while career orientation, in conjunction with individual resources, determines the likelihood of frustration. Cohen (1955) and Cloward and Ohlin (1960) argued that there should be a strong association between social class and delinquency. Stinchcombe (1964), who restricted his attention to misbehavior within the school itself, argued that the career orientation of students and articulation between their career objectives and their high school program are more important influences on misbehavior than family background. Other studies have also shown a relationship between the level of educational aspiration of adolescents and delinquency (Gold, 1963; Hirschi, 1969; Liska, 1971: Elliot and Voss, 1974). Several studies since then (Dentler and Monroe, 1961; Slocum and Stone, 1963; Gold, 1966; and Hirschi, 1969) have also shown the relation between socioeconomic status and delinquency to be weak, though some argue (Gold, 1963; Kornhauser, 1978) that the validity of self-reports of delinquency may vary by socioeconomic status as well. (See Kornhauser (1978) for a discussion of these findings.) Whether these reports are useful in socioeconomic comparisons is still a matter of some controversy.

Many studies have documented a strong relationship between grades in school and misbehavior (Stinchcombe, 1964; Gold, 1963; Hirschi, 1969). This relationship can be understood from a variety of perspectives. On the one hand, it can be argued that those who get low grades will become frustrated with school, because it will not be helpful to them in attaining material success. Such students will be motivated to substitute deviant goals, according to the arguments of Cohen (1955) or Cloward and Ohlin (1960). Alternatively, one could argue that those who get low grades are only weakly attached to educational institutions (Hirschi, 1969) and thus are less likely to internalize educational values and the school's code of conduct. It may be that they get less pleasure out of conforming to school rules, or alternatively that they experience fewer qualms about violating school rules. A third possibility is that they feel that they have a smaller investment in the educational process and thus calculate that the expected cost of misbehavior is lower. Social control theory in particular would stress the articulation of the institutions that perform a socializing function. Even before Sutherland (1939) proposed his "differential association" theory of crime, scholars accepted the importance of the social environment in shaping an individual's behavior patterns. Parents dominate the early environment of a child, and several scholars have argued that quality of family upbringing is an important determinant of adolescent behavior. This link has been demonstrated empirically (Aichorn, 1935; Nye, 1958; Friedlander, 1960; Jensen, 1972; Offer, 1979; Rutter, 1980).

The family is neither the only locus of socializing nor the only institution with an interest in maintaining high levels of commitment of its members. In particular, many scholars have argued that the school also plays a role in shaping the moral development and conduct of a student (cf. Waller, 1932; Janowitz, 1969) but, in contrast to the clear effects of the family on behavior, the ability of the high school to affect student behavior other than by selecting students who enroll in the school has, in contrast, been a matter of controversy in recent years. The issue has been drawn most sharply on the subject of a desired student behavior, academic achievement. Large differences between schools in the level of student achievement clearly exist. These differences can be related to such basic school attributes as the size of student enrollment, the type of community in which the school is located, and the type of school. However, much of the difference can be explained by differences between schools in the characteristics and backgrounds of their student bodies (Coleman et al., 1966; Jencks, 1972). Although in recent years the weight of opinion has moved closer to the position that there are differences between schools on many kinds of student behavior that cannot be explained by differences in the characteristics of their students, the relationship among school characteristics, student characteristics, and misbehavior remains theoretically and empirically important (Elliot and Voss, 1974; Rutter, 1979).

While much of the variation in school outcomes must be attributed to the characteristics of individuals, many researchers continue to stress the ability of the school to affect student behavior (cf. Stinchcombe, 1964, Polk and Schafer, 1972, Spady, 1974, NIE, 1977, Rutter et al. 1979: and Gottfredson and Daiger, 1979). According to one or more of these studies, the size of a school's enrollment, the number of students taught at one time in a classroom, the type of community within which the school is located, the use of ability tracking in the school, the disciplinary procedures employed by the school and the opinions of school's students about the fairness of these procedures can all affect the level of misbehavior in the school.

The High School and Beyond study has collected information that can be used to address some of these concerns. This report focuses on discipline and misbehavior in American high schools. The analysis chapters address four general topics:

- A brief overview of the problems caused by student misbehavior--the perceptions of students and the evaluations of school administrators--is presented in chapter 2.
- Chapter 3 presents a set of measures of misbehavior, describes the association between misbehavior and student characteristics, and explores the complex relationships among misbehavior, course grades, hours spent on homework, and educational expectations.
- In chapter 4, we turn to the way in which levels of misbehavior vary with characteristics of high schools.
- Chapter 5 describes school administrators' reports about rule enforcement and compares these reports with students' perceptions. The association between levels of discipline in the school and rates of misbehavior is analyzed.

1.2 Outline of the High School and Beyond Measures Used in This Report

The data used here were contributed by both students and school administrators.[1] While the dataset is too complex to be easily or completely summarized, figure 1.1 presents an outline of some of the major variables that will be analyzed in this report. All variables are fully described in appendix A. The reader is urged to consult this appendix, since, for the most part, the information presented there is not repeated in the text of this report.

Since much of this report will focus on student misbehavior, these items will be described first. Several indicators of the extent to which students attend class were included. Items concerning absenteeism, tardiness, and class-cutting fall into this category. Types of misbehavior that can disturb the quality of student-student and student-teacher interactions, such as fights among students and disobedience of teachers' instructions, were also asked about. Such serious forms of misbehavior as robbery or vandalism in the vicinity of the school and students' being in trouble with the law were included. While academic performance in school is not normally considered an activity in which one can be "delinquent," there are clearly rules (and punishments) pertaining to academic matters. From this point of view, the requirement that assigned homework be completed is a rule like any other, and its violation will be treated as a misbehavior in much of this report.

Measures of rule enforcement and discipline were fewer in number. The study obtained students' perceptions of which rules were enforced in a school, and whether the disciplinary procedures in a school seemed fair or effective,

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[1] The principal of each high school in the study was supposed to fill out the school questionnaire. We cannot be sure who actually filled it out, however, so we usually refer to this source as the school administrator.

Subject	Type of variable	Source of information	Name of illustrative variable
Misbehavior	Self-reports	Senior and sophomore questionnaire	Days absent
	Student perceptions of frequency of misbehavior in school as a whole	Sophomore questionnaire[1]	Percent who think students often cut class
	Evaluations of seriousness of misbehavior	School administrator questionnaire	Absenteeism
Discipline	Self-reports	Senior and sophomore questionnaires	Had had disciplinary problems
	Student perceptions	Sophomore questionnaire[1]	Percent who think fairness of discipline is low
Rule enforcement	Student perceptions	Sophomore questionnaire[1]	Percent who think hall passes are required
	School reports	School administrator questionnaire	Hall passes required
Academic ability and performance	Self-reports	Senior and sophomore questionnaires	Grades
	Test performance	Sophomore High School and Beyond tests	Math score
Other school characteristics	School reports	School administrator questionnaire	School enrollment
Other student and student body characteristics	Self-reports	Senior and sophomore questionnaires	Average father's education

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[1] This information was not collected from seniors in the sample. See appendix A for more information on the items used in this report.

Figure 1.1--Outline of High School and Beyond variables used in this report.

as well as student reports of whether or not the student had been disciplined by the school.

Academic performance and ability were measured in a series of tests administered as part of the study. In addition, students were asked to report on their high school grades, whether they expected to go to college, and whether they were enrolled in an academic (college preparatory) curriculum.

Finally, school administrators and students were asked to report on a wide range of other characteristics. Some of these, such as the racial composition of the school and the education of the student's father, were used in this report.

The measures used in this report can also be classified by the point of view they express. For some activities, sophomores and seniors reported on their own behavior. These items are usually referred to as student self-reports. Other questions asked sophomores to assess a particular school characteristic or the level of a particular activity in their school. For instance, sophomores were asked to indicate whether fights among students occurred "often," "sometimes," or "rarely or never" in their schools. At another level, school administrators were asked to report whether each of a number of activities was a "serious," "moderate," or "minor" problem or whether it was "not at all" a problem. In some cases, we have the administrators' and the sophomores' perceptions of the same activity in the school. For example, we know both how much of a problem the administrator thought class-cutting was in the school and how frequently sophomores thought class-cutting occurred. In the case of enforcement of rules of conduct, administrators and sophomores were asked about the same set of rules. All of these measures are used in this report.

Yet a third way of classifying the measures used in this report is by whether the measure refers to the student or the school. While all school administrator reports are school-level measures, reports by students within a school may be used to characterize the students as individuals or may be aggregated to characterize the student body of the school. This report uses measures at both levels.

1.3 Technical Note

1.2.1 Sample Sizes

The sample size of each group for which calculations are made is reported in each of the tables so that the reader may make some judgment as to the precision of calculations. The reader should keep in mind, however, that all calculations were done using sample weights, because the High School and Beyond data are not based on a simple random sample of either high schools or students. The use of weighted frequencies in the computation of the tables of the report has implications for the interpretation of table entries. Weighted and unweighted frequencies cannot be used interchangeably. Thus, for example, the base for a percentage presented in a table is not the sample size of a group, but its weighted frequency. Similarly, the reader cannot assume that the relative group sizes one would calculate using sample sizes would be the same as those that one would correctly calculate using the weighted group frequencies.

In some tables, group sizes do not add to the total sample size because the information for the classifying variable is not available for all cases. For example, the number of male sophomores and the number of female sophomores does not sum to the total number of sophomores because some students did not report their sex. Similarly, the number of cases in any particular calculation will differ somewhat from the total group size in the sample due to item nonresponse.

The number of schools available for school-level analyses (before taking item nonresponse into account) is 1,015 for school-level variables constructed from student reports and 988 for school-level variables obtained from the reports of school administrators. This is due to the fact that while students from 1,015 schools participated in the study, school questionnaires were available for only 988 schools. The main student sample consists of 58,270 students. This report, like others in this series, is based on a slightly larger number (30,263 sophomores and 28,465 seniors), since the twins of some sampled students were included in the original data files. All calculations use the appropriate student or school weights.

1.2.2 Correlation and Regression Coefficients

Correlation matrices, whether used in correlation or regression analysis, were computed using pairwise deletion of cases with missing information. Thus, each coefficient within a matrix was computed using all cases that had valid information for the variables involved. The t-values presented for regression coefficients were then corrected for item nonresponse. (The correction assumed, for example, 800 degrees of freedom in most school-level equations. Given the pattern of item nonresponse, this is a conservative correction.) This procedure allows the analyst to maximize the amount of information that goes into the calculation of each coefficient, but then to report t-values which avoid making any overly generous assumptions about the amount of information used.

Unless specified otherwise, regression coefficients were estimated using generalized least squares.

When a regression coefficient is extremely small, it is expressed in scientific notation. For example, the coefficient ".000000076" would be entered in a table as "7.6 E-08."

1.2.3 Significance Testing

Normally a t-value of about 2.0 or greater is taken to mean that a coefficient is different from zero at the .05 significance level. In this report, the t-values included in the regression tables, the significance levels reported in the correlation tables, and any standard errors that the reader may compute from tables that display percentages should be adjusted by the reader to take several factors into account. Such indicators of significance assume a simple random sample. A conservative adjustment for the complex sample design employed in the High School and Beyond study would be to require a t-value of about 3.2 for significance at the .05 level. This amounts to assuming a design effect of roughly 1.6 for this sample, that is, that the t-value which would give a specified level of significance using a simple random sample should be multiplied by 1.6 to give the same level of significance with the current sample. The choice of 1.6 as an overall design effect is somewhat arbitrary but is of the same order of magnitude as design effects which have been calculated for student subgroups in this sample defined by sex and race.

The design adjustment effect takes into account only the difference between a simple random sample and the present complex sample design. There are other factors that the reader may wish to take into account in making judgments of statistical significance. For example, the fact that multiple comparisons are being made requires that a more stringent criterion (a higher t-value) be adopted for significance at the .05 level. On the other hand, when an effect is replicated within subgroups, even though the effect might be considered of borderline significance in any one subgroup, the reader may wish to consider it significant for the sample as a whole.

CHAPTER 2

AN OVERVIEW OF STUDENT MISBEHAVIOR IN HIGH SCHOOLS

How critical is the problem of misbehavior in American high schools? Other studies have attempted to describe the levels of misbehavior in schools, and to uncover both the factors that motivate students to behave in a particular way and the factors that allow or restrain this behavior. A principal source of information about the magnitude of the problem has been the study Violent Schools-Safe Schools (Safe School Study) sponsored by the National Institute of Education (NIE, 1977), which documented significant student behavior problems in high schools. It showed, for example, that crime, violence, and other disruptions are serious problems in about 8 percent of the nation's public schools. About 16 percent of secondary school students in the country say that they avoid at least three places in the school out of fear of being attacked, and 3 percent say they are afraid most of the time they are in school. The report estimated that 151,000 cases of crime occur each month in United States public schools. While the Safe School Study found no evidence that crime and other, less serious, forms of misbehavior in school were getting worse, it documented disturbingly high levels of these problems.

No simple answer can be given to the question of how disorderly American high schools are. A description of a high school as orderly or disorderly, if it is precise, must join a clear definition of what constitutes "disorder" to observations of many different types of incidents and to some standard, whether it be comparative or normative. Instead of trying to answer this question directly, we will describe the levels of student misbehavior as measured by the self-reports and perceptions of students and school administrators in the High School and Beyond data.

The school administrators were asked how serious a problem they felt several forms of misbehavior were in their schools. Table 2.1 contains the details of their answers. Relatively few schools reported that physical conflicts among students or between teachers and students were serious problems; still fewer described rape or student possession of weapons as even moderate problems. In contrast, many more school administrators complained about the incidence of robbery, theft, and vandalism of school property. Class-cutting, the use of drugs or alcohol, and absenteeism are without question the most widespread problems experienced by high schools; over 40 percent of the schools reported that alcohol or drug use was at least a moderate problem, and over 50 percent felt the same way about absenteeism. School administrators rated absenteeism a serious problem more often than any other item on the list.

The student reports also emphasized that American high schools have not been paragons of order. From the students' as well as the school administrators' point of view, schools have had the greatest difficulty in successfully meeting the challenge of keeping students in the classroom during school hours. We asked the sampled sophomores in each high school to report whether absenteeism, class-cutting, and a variety of other problems "often happen," "sometimes happen," or "rarely or never happen" in their high schools. The six activities were:

1. Students don't attend school.
2. Students cut class, even if they attend school.
3. Students talk back to teachers.
4. Students refuse to obey instructions.

Table 2.1.--Percentage distribution of schools according to school administrator's reports of the seriousness of school problems: Spring 1980

School problem	Total	Seriousness of school problems			
		Serious	Moderate	Minor	Not at all
Absenteeism	100.0	8.1	39.7	43.5	8.7
Student use of drugs or alcohol	100.0	5.6	36.5	50.5	7.4
Class cutting	100.0	4.7	25.6	51.6	18.1
Vandalism of school property ...	100.0	2.4	19.6	68.5	9.5
Robbery or theft	100.0	1.7	16.1	69.1	13.1
Verbal abuse of teachers	100.0	0.1	8.3	62.8	28.8
Physical conflicts among students	100.0	0.1	5.8	62.6	31.5
Conflicts between students and teachers	100.0	0.0	5.2	69.5	25.3
Student possession of weapons	100.0	0.0 1/	0.5	21.1	78.4
Rape or attempted rape	100.0	0.0	0.2	3.9	95.9

NOTE: Variables are defined in appendix A. Table entries were calculated using school weights. The sample size on which each of the percentage distributions is based may differ slightly from the total number of schools (988) due to item nonresponse.

1/ Cell entry is less than 1 percent but not zero.

5. Students get in fights with each other.
6. Students attack or threaten to attack teachers.

The cumulative percentage distribution of schools by the percentage of sophomores in each school who say that each of these activities "often" happens is plotted in figures 2.1 through 2.6. In addition, both the sophomores and seniors were asked to indicate the truth of the following statement: "I don't feel safe at this school." The percentage of students in each school responding affirmatively is plotted in figures 2.7 and 2.8.

From the data in these figures, we can see that in over half the schools at least 35 percent of the sophomores said that students often do not attend school. In half the high schools over 50 percent of the sophomores felt that students often cut class. The self-reports of sample sophomores and sample seniors (presented in more detail in later chapters) tell the same story: 30 percent of the sophomores and fully 45 percent of the seniors report that "every once in awhile" they cut a class. Sophomores averaged 3 days of absenteeism not due to illness in the first semester of the 1979-80 academic year; seniors averaged almost 3.5 days during that time.

A further examination of sophomore perceptions of misbehavior in the high school suggests that school administrators understated the level of these problems. Fewer than 6 percent of the high school administrators said that fighting among students was even a moderate problem. Figure 2.6 shows that more than 35 percent of the sample sophomores say that students often get in fights with each other in a substantial number (more than 15 percent) of the high schools. Figures 2.7 and 2.8 show that it is not uncommon for sophomores and seniors to say that they don't feel safe in school. At least 15 percent of the sample sophomores responded this way in about 20 percent of the high schools. Similarly, a significant minority of sophomores reported that

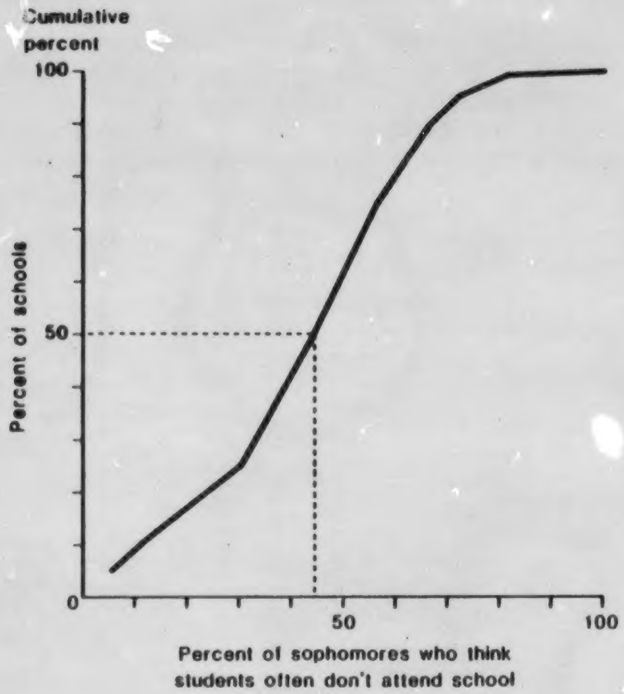

Figure 2.1.--Cumulative percentage distribution of schools according to the percentage of sophomores who think that students often don't attend school

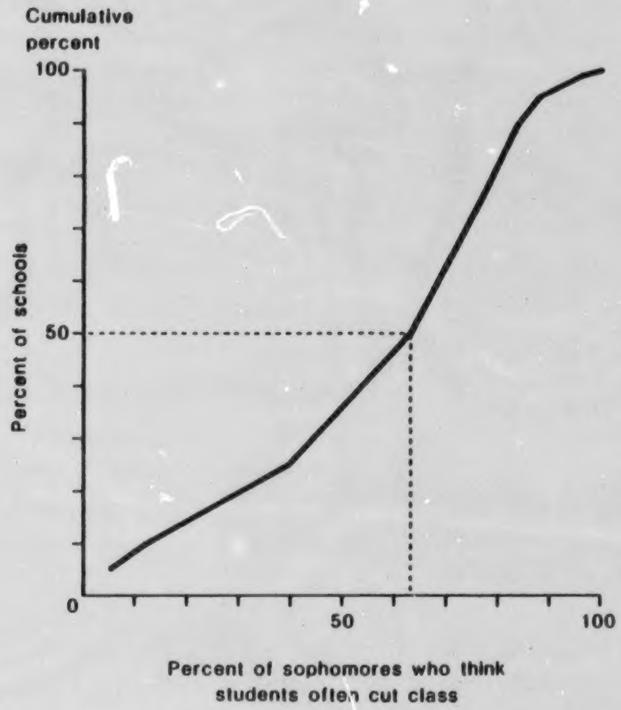

Figure 2.2.--Cumulative percentage distribution of schools according to the percentage of sophomores who think that students often cut class

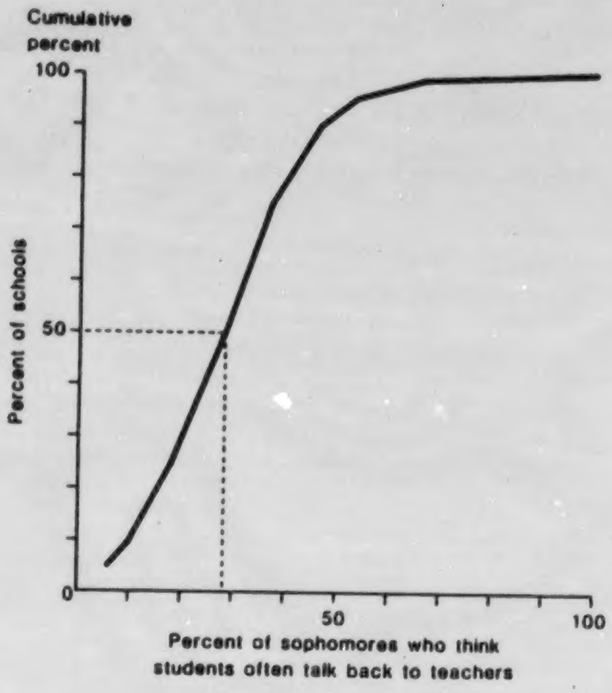

Figure 2.3.--Cumulative percentage distribution of schools according to the percentage of sophomores who think that students often talk back to teachers

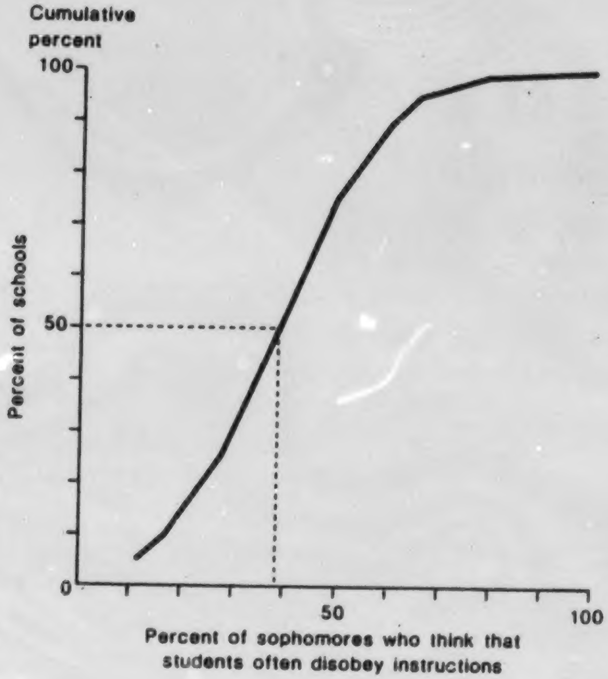

Figure 2.4.--Cumulative percentage distribution of schools according to the percentage of sophomores who think that students often disobey instructions

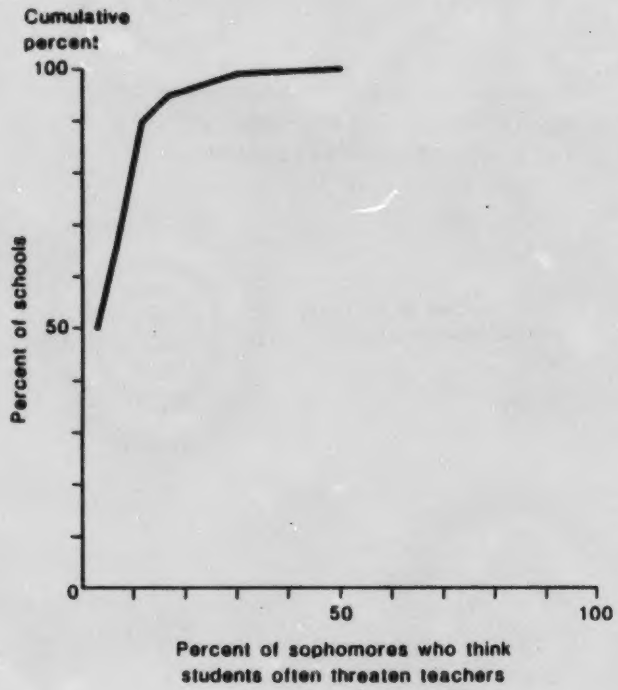

Figure 2.5.--Cumulative percentage distribution of schools according to the percentage of sophomores who think that students often threaten teachers

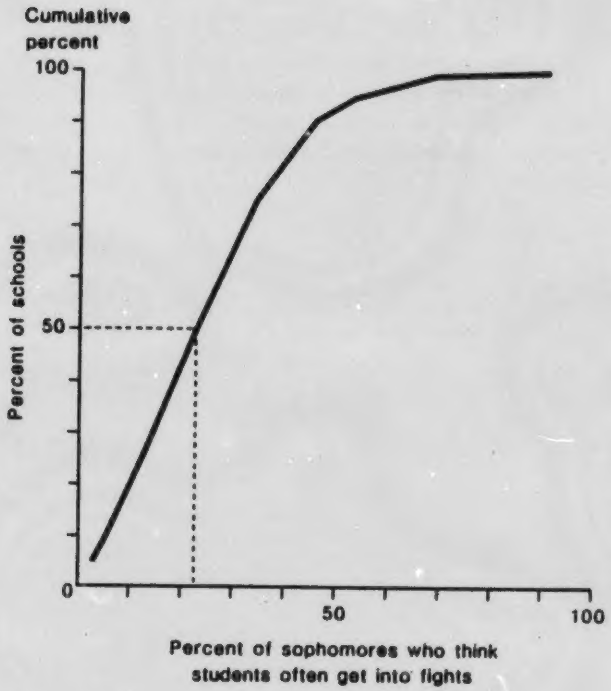

Figure 2.6.--Cumulative percentage distribution of schools according to the percentage of sophomores who think that students often get into fights

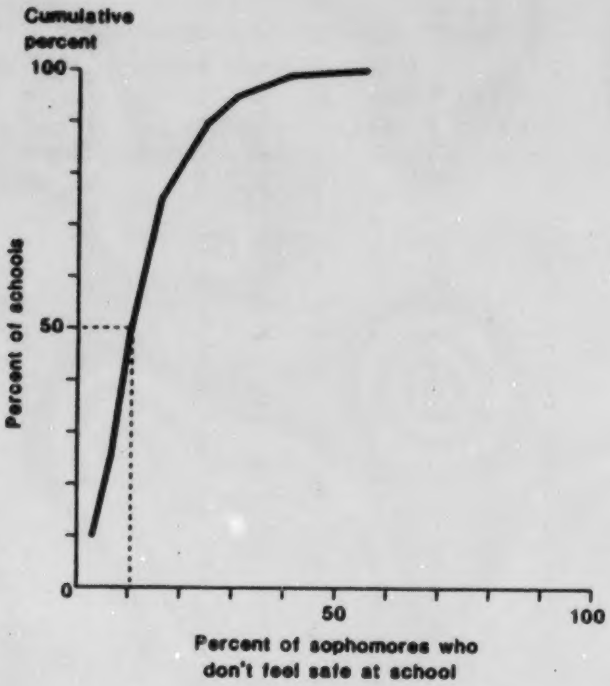

Figure 2.7.--Cumulative percentage distribution of schools according to the percentage of sophomores who don't feel safe at school

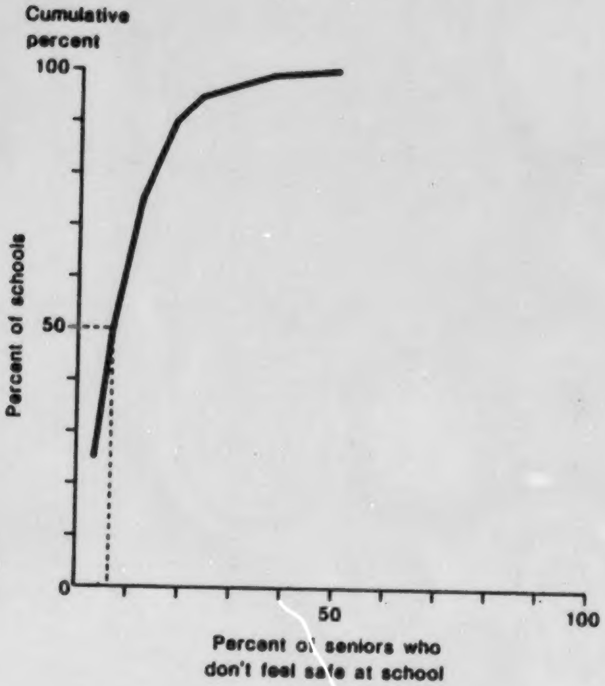

Figure 2.8.--Cumulative percentage distribution of schools according to the percentage of seniors who don't feel safe at school

students often talk back to teachers or refuse to obey instructions in many of the sample high schools. The threat or use of force against teachers is the only form of misconduct thought to be rare by almost all of the High School and Beyond sophomores.

While the High School and Beyond data make it clear that a substantial fraction of the high schools in this country have only a precarious hold on social order, and that misbehavior afflicts the majority of them to a lesser degree, the plight of the many should not be allowed to obscure the exemplary social conditions found in a minority of high schools. An examination of the descriptions by the school administrators and students shows that a relatively large number of the nation's high schools are comparatively free of misbehavior. According to school administrators, the use of drugs or alcohol is one of the two most serious problems--and, given the important place these substances have in both student and adult culture and the patterns of use that are designed to keep them from sight, one must be a bit skeptical that even as many as 7 percent of the schools can truthfully claim these activities don't exist there.

Vandalism, cutting classes, and absenteeism can, of course, be monitored more accurately. For each of these activities, it appears that for about 10 percent of the high schools in the country these problems are not significant. Student reports appear to confirm this interpretation for activities dealing with absenteeism. The High School and Beyond data show that in the 10 percent of the high schools with the best attendence records only about one in ten sophomores claims that class-cutting and absenteeism often happen in their schools.

In summary, the High School and Beyond data provide evidence that student misbehavior is still a major problem for American high schools. At the same time, the data show that many students do conform to school rules, and that many schools have orderly environments. In the next three chapters of this report, we examine the attributes of schools and students that are related to misbehavior among students and the success of high schools in maintaining order.

CHAPTER 3

MISBEHAVIOR BY HIGH SCHOOL STUDENTS

In this chapter we take up the question of how strongly the reports of misbehavior by High School and Beyond students are related to such characteristics as socioeconomic status, family structure, involvement of the parents in monitoring the student, and academic performance. While we do not ignore the influence of school characteristics in the analysis of this chapter, we delay a detailed investigation of their role until chapters 4 and 5.

The current chapter has three sections. First, the relationships within a set of measures of student misbehavior are briefly described. Second, the association between these measures of misbehavior and various indicators of the student's social and economic status and academic performance are examined separately for sophomores and seniors. Finally, a model is developed relating several kinds of student behavior--misbehavior, high school grades, time spent on homework, and present educational expectations--to student, family, and school characteristics. This model is estimated separately for sophomore males and females. The model provides evidence of the impact of individual characteristics and of the family and school environments on student behavior.

3.1. Relationships Among Five Self-Reported Types of Misbehavior by Educational Cohort

An examination of misbehavior at the student level using the High School and Beyond data must rely on student reports about their own behavior. Of the items concerned with aspects of misbehavior, five were selected that permit comparisons between sophomores and seniors: the number of days that each student reported being absent from school for reasons other than illness, between the start of school and Christmas vacation in the academic year 1979-1980;[1] the number of days a student reported being late during this same period; whether a student reported cutting class "every once in a while"; whether he or she reported refusing to do assigned homework on a regular basis; and whether he or she has been in serious trouble with the law.[2] While the extent to which this last item is an index of misbehavior in high school is unknown, it is certainly associated with conduct in high school. We therefore felt its inclusion in the analysis would be informative.

Tables 3.1 and 3.2 show the relationships among the measures of misbehavior for sophomores and seniors. The quantity in each cell is the proportion of those students who indicated that they had engaged in an activity listed with a column label who had also engaged in an activity listed with a row label. Such estimates of conditional probabilities are useful for examining relationships among items many of which are dichotomous. The pattern of association among these behaviors can be examined by comparing the estimates of unconditional and conditional probabilities. For example, 30 percent (.30) of all the sophomores in the High School and Beyond study said that they have cut class. However, among those students who reported that they have been in serious trouble with the law, 60 percent (.60) said that they also cut class. Approximately one in twenty sophomores indicated that they have been in serious trouble with the law. But among those who have cut class "every once in a while," we see that 11 percent (.11) have evidently

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[1] It should be noted that we do not know how students took into account absences permitted by school policy (e.g., for college interviews).

[2] Two items concerned with aspects of misbehavior were omitted from the analysis in this chapter: the questions about whether or not the student had had "disciplinary problems" or been "suspended or put on probation" provide information about the disciplinary response of the school as well as about student behavior, and are discussed in chapter 5. An item which asked if the student is seen as a "troublemaker" is available only for sophomores, and so is not included in this initial discussion. This item will be discussed in a later section of this chapter which focuses on misbehavior among sophomores.

Table 3.1.--Estimates of conditional probabilities that sophomores have misbehaved in one way, given that they have misbehaved in another way: Spring 1980 1/

Probability that a sophomore has misbehaved in one of these ways:	Given that the sophomore has misbehaved in one of these ways:						Unconditional probablity 2/
	Cuts class	Doesn't do assigned homework	Days absent:		Days late:	Has been in serious trouble with the law	
			5 days or more	11 days or more	5 days or more		
Cuts class	1.000	.596	.556	.639	.593	.598	.301
Doesn't do assigned homework	.086	1.000	.103	.151	.092	.159	.045
Days absent: 5 or more	.312	.397	1.000	--	.417	.361	.173
Days absent: 11 or more	.122	.200	--	1.000	.198	.310	.060
Days late: 5 or more	.267	.286	.334	.462	1.000	.297	.138
Has been in serious trouble with the law	.106	.197	.115	.154	.113	1.000	.053

NOTE: Variables are defined in appendix A. Table entries were calculated using student weights.

1/ Estimated conditional probabilities are the number of students who indicated that they had done both a row and a column behavior, divided by the number who indicated that they had done the column behavior. Thus, the conditional probability that a sophomore will "cut class" given that he or she "doesn't do assigned homework," is estimated to be .596.

2/ The denominator for this column is the total (weighted) number of sophomores. The number of cases used in the calculation of each entry differs slightly from the total number of sophomores (30,263) due to item nonresponse.

Table 3.2.--Estimates of conditional probabilities that seniors have misbehaved in one way, given that they have misbehaved in another way: Spring 1980 1/

Probability that a senior has misbehaved in one of these ways:	Given that the senior has misbehaved in one of these ways:						Unconditional probablity 2/
	Cuts class	Doesn't do assigned homework	Days absent:		Days late:	Has been in serious trouble with the law	
			5 days or more	11 days or more	5 days or more		
Cuts class	1.000	.736	.687	.752	.712	.751	.448
Doesn't do assigned homework	.065	1.000	.078	.111	.080	.166	.040
Days absent: 5 or more	.324	.409	1.000	--	.432	.396	.212
Days absent: 11 or more	.117	.193	--	1.000	.190	.204	.070
Days late: 5 or more	.306	.387	.394	.525	1.000	.373	.193
Has been in serious trouble with the law	.066	.165	.074	.116	.076	1.000	.040

NOTE: Variables are defined in appendix A. Table entries were calculated using student weights.

1/ Estimated conditional probabilities are the number of students who indicated that they had done both a row and a column behavior, divided by the number who indicated that they had done the column behavior. Thus, the conditional probability that a senior will "cut class" given that he or she "doesn't do assigned homework," is estimated to be .736.

2/ The denominator for this column is the total (weighted) number of seniors. The number of cases used in the calculation of each entry differs slightly from the total number of seniors (28,465) due to item nonresponse.

been in serious trouble with the law. Tables 3.1 and 3.2 show moderate to strong relationships among all the listed behaviors. The patterns of association are similar for sophomores and seniors. For both cohorts, students with high levels of absenteeism are more likely than any of the other groups to have cut class or to have been frequently tardy. Students in both classes who reported that they refuse to do homework are more likely than others to have reported being in trouble with the law. Moreover, students who have been in trouble with the law are more likely to refuse to do assigned homework than are students in the other groups.

Tables 3.1 and 3.2 also show that the activities listed exhibit substantial independent variation as well. In no case does information that a student has done one of the listed activities allow one to assume that he or she has necessarily misbehaved in other ways, too. Since these activities are partially independent, they are treated separately in the tables and discussion that follow, so that distinctions among them can be explored. A scale that combines several measures of misbehavior is discussed in a later section.

3.2. The Distribution of Misbehavior by Student Characteristics

3.2.1 Cohort Differences in Misbehavior

Previous research has shown that delinquency rates vary systematically with age (Rutter, 1980). As indicated in table 3.3, seniors have poorer attendance records than do sophomores. Compared to sophomores, seniors reported an average one half day more per semester of unexcused absence. However, seniors have lower rates of misbehavior than sophomores on two other measures: proportionately fewer seniors reported that they don't do assigned homework, and considerably fewer seniors reported that they have been in serious trouble with the law.

Table 3.3.--Rates of selected self-reported types of misbehavior, by educational cohort and sex: Spring 1980

Educational cohort and sex	Sample size	Type of misbehavior				
		Days absent (mean)	Days late (mean)	Cuts class (percent)	Doesn't do assigned homework (percent)	Has been in serious trouble with the law (percent)
All sophomores	30,263	2.88 (4.33) 1/	2.46 (4.26)	30.00	4.42	5.26
Males	13,459	2.96 (4.46)	2.67 (4.60)	31.78	6.82	8.47
Females	14,634	2.82 (4.23)	2.27 (3.90)	28.35	2.22	2.34
All seniors	28,465	3.42 (4.48)	3.27 (5.10)	44.78	4.13	3.91
Males	12,993	3.51 (4.61)	3.58 (5.41)	49.15	6.99	6.77
Females	14,189	3.34 (4.35)	2.98 (4.78)	40.87	1.56	1.29

NOTE: Variables are defined in appendix A. Table entries were calculated using student weights.

1/ Numbers in parentheses are standard deviations.

In evaluating these differences between sophomores and seniors, the reader must keep in mind that the responses of two cohorts are not strictly comparable. The smaller (weighted) size of the senior cohort reflects the status of seniors as "survivors:" many of their colleagues (over 800,000 according to a recent estimate--BLS, 1977) have dropped out of high school before reaching the final year.[1] The absence of dropouts from the senior cohort clearly affects the interpretation of responses to these questions.

The tabulations suggest the effect of the dropout rate in another way. The question about delinquency, which asks whether the student "has been in serious trouble with the law," was not limited to a particular period of time and could be construed as referring to a student's entire life. Logically, then, older cohorts should have higher delinquency rates if their careers have been similar to those of younger cohorts since they have had more years in which to be delinquent. This logical assertation would not be an ideal guide to the empirical relationship in the best of circumstances, however, since respondents may be more likely to remember (or admit to) more recent events. The lower rate of being in trouble with the law among seniors than sophomores indicates the positive relationship between delinquency and dropping out of school (see Elliott and Voss, 1974).

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[1] We cannot yet get similar information from the High School and Beyond Study. The best we can do with the High School and Beyond data is to compute rates of expected school completion. This measure is quite different from a dropout rate: first, because many dropouts eventually return to school; second, because this quantity is a measure of intentions, not behavior. We calculated the expected rate of dropping out for the sophomores in the sample, based on their responses to the question about educational plans. However, we found that very few students--less than 2 percent--responded that they expect never to finish high school.

3.2.2. Sex Differences in Misbehavior

Sex differences in misbehavior by high school students are well documented. Table 3.3 compares the rates of misbehavior by sex and educational cohort. The results show that male and female rates of misbehavior differ, but that the size of the difference depends on the activity. Differences between males and females in the sophomore cohort in absenteeism and class-cutting are very small. Sex differences in tardiness are of moderate size, but the sexes have very different levels of two other activities: males are much more likely to say that they don't do assigned homework and to report that they have been in serious trouble with the law than females. Differences between males and females are slightly larger in the senior cohort.

3.2.3. Family Income Differences in Misbehavior

We noted in the introduction to this report that the argument for a relationship between social class and delinquency has often been based on one of two principal theories. An early perspective suggested that inadequate socialization, thought to occur most frequently in lower class families (compare the classic works of Thrasher, 1927, and Shaw and McKay, 1942), results in a configuration of personal controls too weak for the youth to resist the temptation of delinquent activity. Further research has shown that the relationship between socioeconomic status and delinquency is weaker than these early theories predicted (e.g., Hirschi, 1969). More recent theories, therefore, have argued that one must investigate the quality of socialization directly rather than assume it can be adequately predicted by knowledge of a family's economic position.

Because of the historical importance of this debate, the relationship between socioeconomic status and behavior is of continuing interest. In the

High School and Beyond data, student reports of family income are available as a measure of family economic status. Tables 3.4 and 3.5 show the relationship between the self-reported misbehaviors and family income for sophomores and seniors. The results replicate the weak association between socioeconomic status and misbehavior found in previous studies. The relationship is not monotonic, but appears to be curvilinear. Students from the poorest families have the highest rates of misbehavior, but the best-behaved students are from families of moderate rather than high income. Moreover, this pattern is replicated among sophomores and seniors of both sexes.

Table 3.4 shows, for instance, that among all sophomores, those who report less than $7,000 a year in family income have the highest mean absenteeism. Mean absenteeism declines as income increases, until the $16,000 income boundary is reached. Mean absenteeism remains stable for income groups above $16,000 a year, until it increases in the highest income categories. The pattern for tardiness is similar. First, the mean number of days late falls with income. In the $12-16,000 income category, the mean number of days late reaches a minimum; thereafter, it increases with income. Sophomores from families with incomes above $38,000 have the highest mean days late of all the income groups. Sophomores from families with $7-12,000 incomes are less likely than those in other income groups to admit that they cut class. These patterns of association between income and absenteeism, tardiness, and class-cutting are all curvilinear and differ only in the location of the minimum.

The patterns of association between income and refusal to do homework and having been in trouble with the law are not as consistent, but the basic features are similar--a decline in misbehavior rates as one moves from the lowest income categories to the middle income groups and a rise in misbehavior rates in the highest income categories.

Table 3.4.--Rates of selected types of misbehavior reported by sophomores, by sex and family income: Spring 1980

Sex and type of misbehavior	Family income $6,999 or less	$7,000-11,999	$12,000-15,999	$16,000-19,999	$20,000-24,999	$25,000-37,999	$38,000 or more
All sophomores:							
Sample size	2,021	3,174	4,347	4,768	4,391	3,301	2,876
Days absent (mean)	3.90 (5.15)1/	3.26 (4.71)	2.75 (4.06)	2.63 (4.09)	2.61 (4.08)	2.63 (3.97)	2.89 (4.41)
Days late (mean)	2.74 (4.57)	2.41 (4.22)	2.18 (3.85)	2.26 (4.04)	2.34 (4.16)	2.34 (4.10)	2.91 (4.61)
Cuts class (percent)	31.91	27.88	28.19	28.96	29.03	30.86	32.78
Doesn't do assigned homework (percent)	7.11	4.48	4.34	3.90	4.36	3.01	4.35
Has been in serious trouble with the law (percent)	7.96	5.28	5.04	4.71	5.03	4.42	6.93
Males:							
Sample size	778	1,305	1,928	2,159	2,074	1,747	1,670
Days absent (mean)	3.96 (5.06)	3.33 (4.55)	2.88 (4.29)	2.82 (4.35)	2.79 (4.37)	2.64 (4.16)	2.86 (4.56)
Days late (mean)	3.08 (4.84)	2.77 (4.82)	2.31 (4.05)	2.55 (4.57)	2.63 (4.67)	2.29 (4.04)	3.05 (4.94)
Cuts class (percent)	37.77	30.71	30.05	31.00	32.16	29.02	33.21
Doesn't do assigned homework (percent)	11.53	7.30	7.44	6.21	7.10	4.40	5.94
Has been in serious trouble with the law (percent)	13.70	8.78	8.73	8.20	7.87	5.86	9.45
Females:							
Sample size	1,036	1,653	2,215	2,440	2,105	1,363	1,078
Days absent (mean)	3.85 (5.23)	3.20 (4.81)	2.63 (3.85)	2.46 (3.86)	2.43 (3.75)	2.60 (3.69)	2.94 (4.20)
Days late (mean)	2.47 (4.33)	2.11 (3.62)	2.05 (3.66)	1.98 (3.49)	2.06 (3.58)	2.33 (4.03)	2.72 (4.07)
Cuts class (percent)	27.24	25.73	26.59	28.89	26.02	39.94	32.24
Doesn't do assigned homework (percent)	3.85	2.20	1.79	1.74	1.63	1.06	2.35
Has been in serious trouble with the law (percent)	3.49	2.34	1.93	1.56	2.28	2.47	3.29

NOTE: Variables are defined in appendix A. Table entries were calculated using student weights.

1/ Numbers in parentheses are standard deviations.

Table 3.5.--Rates of selected types of misbehavior reported by seniors, by sex and family income: Spring 1980

Sex and type of misbehavior	Family income						
	$6,999 or less	$7,000-11,999	$12,000-15,999	$16,000-19,999	$20,000-24,999	$25,000-37,999	$38,999 or more
All seniors:							
Sample size	1,905	2,997	4,014	4,334	4,404	3,861	3,174
Days absent (mean)	3.80 (4.93)1/	3.43 (4.45)	3.39 (4.33)	3.43 (4.46)	3.27 (4.31)	3.19 (4.11)	3.67 (4.89)
Days late (mean)	2.90 (4.86)	2.85 (4.54)	2.89 (4.66)	3.07 (4.94)	3.18 (5.02)	3.42 (5.12)	4.24 (6.00)
Cuts class (percent)	36.07	39.72	42.01	44.19	45.00	46.82	52.94
Doesn't do assigned homework (percent)	4.86	3.95	3.44	4.76	4.27	3.21	4.34
Has been in serious trouble with the law (percent)	5.02	3.13	3.54	3.85	3.90	3.81	5.12
Males:							
Sample size	682	1,248	1,802	1,976	2,116	2,035	1,780
Days absent (mean)	4.02 (5.31)	3.45 (4.29)	3.45 (4.44)	3.56 (4.59)	3.34 (4.34)	3.17 (4.09)	3.78 (5.19)
Days late (mean)	3.30 (5.33)	2.92 (4.47)	3.22 (4.91)	3.44 (5.39)	3.49 (5.32)	3.64 (5.26)	4.45 (6.29)
Cuts class (percent)	43.03	44.33	48.18	48.56	48.55	51.35	53.92
Doesn't do assigned homework (percent)	8.40	6.48	6.63	8.02	7.07	5.19	6.56
Has been in serious trouble with the law (percent)	9.66	5.60	6.03	6.81	6.72	6.27	8.04
Females:							
Sample size	1,078	1,633	2,086	2,263	2,186	1,708	1,314
Days absent (mean)	3.65 (4.64)	3.42 (4.57)	3.34 (4.23)	3.32 (4.34)	3.21 (4.27)	3.21 (4.14)	3.53 (4.46)
Days late (mean)	2.63 (4.49)	2.80 (4.59)	2.61 (4.41)	2.75 (4.48)	2.88 (4.70)	3.16 (4.92)	3.77 (5.59)
Cuts class (percent)	31.22	36.16	36.71	40.34	41.62	41.50	51.67
Doesn't do assigned homework (percent)	2.48	2.03	0.76	1.94	1.66	0.92	1.53
Has been in serious trouble with the law (percent)	1.81	1.19	1.40	1.25	1.21	0.92	1.34

NOTE: Variables are defined in appendix A. Table entries were calculated using student weights.

/ Numbers in parentheses are standard deviations.

The pattern of association between reported family income and the misbehavior measures for male and female sophomores replicates the overall pattern. The major differences between the sexes are in the overall levels of the rates--as pointed out before, they are higher for males--and the location of the income category where the lowest rates of misbehavior are found. The female students with the lowest rates of misbehavior generally report lower family incomes than do the best-behaved males. For example, female students from families with incomes in the $7-12,000 range have the lowest level of class-cutting, while the income category where the lowest level of class-cutting occurs for males is $25-38,000. For other measures of misbehavior, the sex difference in the relationship of the misbehavior measure with income is much smaller. Seniors generally exhibit a curvilinear pattern similar to that of the sophomores, but they do not show the same systematic differences between male and female minimum misbehavior rates.

The reader should note that many of the differences between group rates are very small. The important findings of tables 3.4 and 3.5 are, first, that the relationship between income and misbehavior is weak, and, second, that the students at the extremes of the income distribution generally have higher rates of misbehavior than those in the middle of the range.

3.2.4 Grades and Misbehavior

We noted in the introduction that many authors (Cloward and Ohlin (1960), Gold (1963), and Hirschi (1969) to name a few) have argued that delinquency should be related to grades in school. Inability to do well in school is linked with poor chances for material success, heightened frustration with the social order, weak attachment to the school, and thus, increased rates of delinquency. Gold (1963) and Hirschi (1969) among others, have documented a statistical association between grades in school and delinquency.

Consistent with previous studies, table 3.6 shows that the High School and Beyond measures of misbehavior are strongly related to grades. Sophomore males whose grades are mostly below D have more than six times as much absenteeism as students who get mostly A's, and the ratio for females is even larger. Among sophomores, the average number of days late for those with the worst grades is over four times as high as the rate for the best students. This strong relationship--much greater than that observed between conduct and socioeconomic status--exists for all five kinds of misbehavior. For example, 38 percent of the sophomore males who get mostly D's refuse to do assigned homework, as opposed to 1.6 percent of the sophomore males who get mostly A's. For females the relationship between grades and doing assigned homework, is, if anything, stronger. Similarly, the proportion cutting class is much higher among students who do poorly than among those who do well. The percentage who have been in trouble with the law is particularly high at the lower grade levels. Over one out of four sophomore males with very low grades admits to having been in trouble with the law, as compared with fewer than one in 25 males who get mostly A's. The pattern for females is very similar.

Table 3.7 shows the pattern of association between senior self-reported behavior and senior grades. In general, it is very similar to the pattern for sophomores.

Students differ not only in their chances to achieve material and social success--their life chances, we might say--but also in the pressure they feel to achieve success. Some social scientists have argued that adolescents who experience particularly strong pressure to achieve may be especially motivated to rebel against this pressure by violating legal and school norms. One obvious source of pressure for success is the expectations of parents. Pressure can also be self-imposed, arising perhaps from a need to

Table 3.6.--Rates of selected types of misbehavior reported by sophomores, by sex and grades: Spring 1980

Sex and type of misbehavior	Grades							
	Mostly A's	A's & B's	Mostly B's	B's & C's	Mostly C's	C's & D's	Mostly D's	Mostly below D's
All sophomores:								
Sample size	2,869	5,241	5,441	7,992	4,450	2,868	731	330
Days absent (mean)	1.43 (2.56)1/	1.78 (2.86)	2.14 (3.26)	2.93 (4.10)	3.75 (4.83)	4.82 (5.82)	6.35 (6.80)	10.09 (8.61)
Days late (mean)	1.45 (3.09)	1.58 (3.04)	1.92 (3.44)	2.50 (4.14)	3.22 (4.81)	3.95 (5.71)	4.66 (6.19)	6.79 (7.78)
Cuts class (percent)	13.68	19.80	24.39	31.70	39.15	49.05	53.93	65.67
Doesn't do assigned homework (percent)	0.77	1.36	1.75	3.74	6.15	11.83	21.31	33.23
Has been in serious trouble with the law (percent)	1.65	2.45	3.02	5.36	6.97	10.93	20.92	22.37
Males:								
Sample size	1,090	2,032	2,381	3,506	2,276	1,452	397	184
Days absent (mean)	1.43 (2.74)	1.66 (2.71)	2.08 (3.18)	2.90 (4.09)	3.68 (4.86)	4.52 (5.69)	5.70 (6.61)	9.26 (8.38)
Days late (mean)	1.61 (3.51)	1.67 (3.39)	1.82 (3.31)	2.62 (4.38)	3.28 (4.95)	4.13 (6.01)	4.70 (6.40)	6.94 (8.31)
Cuts class (percent)	14.39	18.76	23.61	32.94	40.27	48.80	50.97	66.78
Doesn't do assigned homework (percent)	1.60	2.39	3.09	5.51	8.54	14.78	23.90	38.29
Has been in serious trouble with the law (percent)	3.63	3.81	4.28	8.80	10.17	15.15	26.26	28.91
Females:								
Sample size	1,697	2,988	2,784	3,893	1,740	1,065	235	103
Days absent (mean)	1.43 (2.44)	1.87 (2.96)	2.19 (3.33)	2.96 (4.10)	3.84 (4.79)	5.20 (5.95)	7.44 (7.05)	11.54 (8.81)
Days late (mean)	1.34 (2.79)	1.52 (2.79)	1.98 (3.48)	2.40 (3.93)	3.13 (4.63)	3.67 (5.22)	4.63 (5.89)	6.53 (6.81)
Cuts class (percent)	13.24	20.58	24.83	30.62	37.67	49.42	58.41	63.66
Doesn't do assigned homework (percent)	0.25	0.69	0.65	2.15	2.91	7.60	16.59	24.79
Has been in serious trouble with the law (percent)	0.40	1.56	1.98	2.30	2.82	5.23	10.79	10.95

NOTE: Variables are defined in appendix A. Table entries were calculated using student weights.

1/ Numbers in parentheses are standard deviations.

Table 3.7.--Rates of selected types of misbehavior reported by seniors, by sex and grades: Spring 1980

Sex and type of misbehavior	Grades							
	Mostly A's	A's & B's	Mostly B's	B's & C's	Mostly C's	C's & D's	Mostly D's	Mostly below D's
All seniors:								
Sample size	3,167	5,799	5,783	7,658	3,883	1,628	246	48
Days absent (mean)	2.28 (3.42) 1/	2.54 (3.56)	2.99 (3.93)	3.66 (4.44)	4.20 (5.26)	6.04 (6.26)	7.87 (7.92)	10.06 (8.08)
Days late (mean)	2.05 (3.89)	2.37 (4.17)	3.12 (4.88)	3.49 (5.09)	4.41 (5.94)	5.53 (6.80)	6.44 (7.62)	8.33 (9.40)
Cuts class (percent)	28.73	35.29	43.39	49.84	58.15	62.62	67.21	79.41
Doesn't do assigned homework (percent) ..	1.11	1.92	2.73	4.52	6.27	13.58	24.72	53.30
Has been in serious trouble with the law (percent)	1.62	1.62	2.93	4.01	7.37	10.56	14.06	12.98
Males:								
Sample size	1,165	2,183	2,556	3,733	2,152	929	153	31
Days absent (mean)	2.30 (3.87)	2.35 (3.51)	2.94 (3.97)	3.62 (4.47)	4.55 (5.12)	5.75 (5.87)	7.34 (7.43)	9.84 (8.60)
Days late (mean)	2.25 (4.21)	2.33 (3.97)	3.34 (5.20)	3.72 (5.32)	4.49 (6.00)	5.80 (7.12)	5.45 (7.15)	8.42 (9.18)
Cuts class (percent)	30.67	37.45	47.18	52.60	60.30	63.36	66.85	81.71
Doesn't do assigned homework (percent) ..	2.11	3.61	5.18	6.88	9.25	16.39	30.03	58.21
Has been in serious trouble with the law (percent)	3.50	2.58	5.38	6.08	10.91	15.04	18.48	18.52
Females:								
Sample size	1,950	3,490	3,028	3,514	1,482	557	69	13
Days absent (mean)	2.27 (3.12)	2.66 (3.58)	3.03 (3.90)	3.71 (4.42)	4.92 (5.45)	6.56 (6.84)	9.11 (8.84)	10.60 (6.62)
Days late (mean)	1.93 (3.69)	2.39 (4.29)	2.94 (4.58)	3.24 (4.81)	4.30 (5.84)	5.05 (6.15)	8.78 (8.18)	8.13 (9.92)
Cuts class (percent)	27.61	33.96	40.18	46.80	54.93	61.33	68.06	73.81
Doesn't do assigned homework (percent) ..	0.54	0.89	0.67	2.00	1.96	8.83	12.51	40.92
Has been in serious trouble with the law (percent)	0.54	1.03	0.84	1.75	2.10	2.69	3.79	0.00

NOTE: Variables are defined in appendix A. Table entries were calculated using student weights.

1/ Numbers in parentheses are standard deviations.

compete with parents, or to meet the student's own standards, which may be derived from parental achievement. Several studies (e.g., Duncan, Featherman, and Duncan, 1972) have shown that the expectations of parents are related to their socioeconomic status. The problem of doing as well as one's parents is obviously more difficult if the parents appear to have done well. Because the chances of meeting a particular career goal usually depend on a student's academic success, the hypothesis that students from high-income families who get poor grades might be especially prone to misbehavior is reasonable.

Stinchcombe (1964) and Hirschi (1969), among others, have examined the relationship of family status and grades to delinquency to see if this prediction is realized. The evidence has been mixed. We examined the association between income and misbehavior at the extremes of the distribution of grades. Table 3.8 shows the relationship between family income and conduct for sophomores who have earned mostly A's in high school. Table 3.9 shows the same relationship for sophomores whose grades so far have been mostly C's or worse.

The results suggest that students from high-income families who get poor grades have a tendency to misbehave that can be explained without including an interaction between family income and grades. However, for students from low-income families, the breakdown of the income-misbehavior distribution by academic achievement shows that the interaction between income and grades is apparently more important. The difference in the rates of class-cutting or being in trouble with the law between students in the lowest and second lowest income groups is much larger for students with high grades than for the sample as a whole. The sample sizes at the extremes are small, however, and any interaction effect is small compared to the effect of grades alone.

Table 3.8.--Rates of selected types of misbehavior reported by sophomores whose grades are mostly A's, by sex and family income: Spring 1980

Sex and type of misbehavior	Family income						
	$6,999 or less	$7,000-$11,999	$12,000-$15,999	$16,000-$19,999	$20,000-$24,999	$25,000-$37,999	Over $38,000
All sophomores:							
Sample size	68	207	389	494	485	444	419
Days absent (mean)	1.36 (1.98)1/	1.48 (2.48)	1.55 (3.03)	1.39 (2.36)	1.31 (2.61)	1.50 (2.61)	1.64 (2.39)
Days late (mean)	1.42 (1.82)	1.30 (2.53)	1.55 (3.80)	1.29 (2.90)	1.02 (1.99)	1.59 (3.27)	1.95 (3.61)
Cuts class (percent)	23.81	10.76	11.35	13.25	11.81	16.79	16.44
Doesn't do assigned homework (percent) ..	0.22	1.67	0.74	0.98	0.96	0.25	0.43
Has been in serious trouble with the law (percent)	4.13	1.15	2.65	0.66	1.54	0.75	1.76
Males:							
Sample size	24	69	124	175	198	194	215
Days absent (mean)	1.97 (2.49)	1.54 (1.87)	2.18 (4.38)	1.20 (2.57)	1.25 (2.26)	1.42 (2.38)	1.52 (2.85)
Days late (mean)	1.91 (2.33)	1.23 (1.98)	2.26 (5.33)	1.44 (3.48)	1.05 (2.02)	1.56 (2.81)	2.02 (3.93)
Cuts class (percent)	30.34	16.84	16.27	10.54	14.36	13.25	17.72
Doesn't do assigned homework (percent) ..	0.00	5.03	1.99	1.06	1.83	0.59	0.84
Has been in serious trouble with the law (percent)	13.59	3.46	7.94	1.20	3.03	0.89	3.40
Females:							
Sample size	41	133	260	309	284	241	193
Days absent (mean)	1.07 (1.61)	1.45 (2.75)	1.24 (1.98)	1.51 (2.24)	1.36 (2.84)	1.59 (2.40)	1.78 (2.78)
Days late (mean)	1.21 (1.48)	1.33 (2.76)	1.20 (2.67)	1.21 (2.52)	1.01 (1.98)	1.63 (3.61)	1.81 (3.18)
Cuts class (percent)	20.73	7.77	8.90	14.42	10.17	19.77	15.21
Doesn't do assigned homework (percent) ..	0.31	0.00	0.12	0.95	0.36	0.00	0.00
Has been in serious trouble with the law (percent)	0.00	0.00	0.00	0.37	0.49	0.66	0.00

NOTE: Variables are defined in appendix A. Table entries were calculated using student weights.

1/ Numbers in parentheses are standard deviations.

Table 3.9.--Rates of selected types of misbehavior reported by sophomores whose grades are mostly C's or lower, by sex and family income: Spring 1980

Sex and type of misbehavior	Family income						
	$6,999 or less	$7,000-$11,999	$12,000-$15,999	$16,000-$19,999	$20,000-$24,999	$25,000-$37,999	Over $38,000
All sophomores:							
Sample size	798	989	1,171	1,230	1,084	698	612
Days absent (mean)	5.25 (5.89)1/	4.78 (5.98)	4.16 (5.22)	4.32 (5.56)	4.30 (5.62)	4.17 (5.38)	4.71 (5.93)
Days late (mean)	3.45 (5.24)	3.56 (5.61)	3.22 (4.70)	3.59 (5.21)	3.66 (5.44)	3.64 (5.22)	4.41 (6.01)
Cuts class (percent)	39.93	41.10	40.74	46.60	43.41	50.00	50.86
Doesn't do assigned homework (percent)	12.64	8.74	9.27	9.[illegible]3	10.21	9.59	12.82
Has been in serious trouble with the law (percent)	8.88	11.30	9.01	9.83	9.51	9.61	14.34
Males:							
Sample size	344	490	625	713	632	408	395
Days absent (mean)	5.41 (5.96)	4.38 (3.56)	4.00 (5.27)	4.33 (5.54)	4.25 (5.84)	3.99 (5.46)	4.51 (6.14)
Days late (mean)	3.77 (5.46)	4.02 (6.23)	3.22 (4.80)	3.72 (5.48)	3.85 (5.79)	3.29 (4.78)	4.56 (6.33)
Cuts class (percent)	45.97	42.67	41.72	46.54	44.54	48.16	48.47
Doesn't do assigned homework (percent)	17.71	12.03	13.43	11.81	14.13	12.19	14.30
Has been in serious trouble with the law (percent)	13.52	15.40	14.30	13.46	11.78	11.72	17.22
Females:							
Sample size	354	401	454	447	364	219	165
Days absent (mean)	5.11 (5.83)	5.23 (6.41)	4.33 (5.14)	4.30 (5.61)	4.41 (5.21)	4.39 (5.10)	4.52 (5.39)
Days late (mean)	3.09 (4.97)	2.95 (4.63)	3.20 (4.55)	3.39 (4.79)	3.39 (4.74)	4.11 (5.72)	4.08 (5.16)
Cuts class (percent)	33.85	39.28	39.74	46.20	41.86	51.54	57.02
Doesn't do assigned homework (percent)	7.77	4.42	4.14	5.14	3.18	3.62	9.47
Has been in serious trouble with the law (percent)	3.98	6.19	2.37	3.82	5.58	4.63	7.59

NOTE: Variables are defined in appendix A. Table entries were calculated using student weights.

1/ Numbers in parentheses are standard deviations.

The consistent finding that rates of misbehavior are higher for students from families of high economic status than for students from middle-income families is puzzling. It is possible that higher status parents are less awed by the authority that the school and its teachers represent and that they pass this orientation on to their children. According to Kohn (1969), working-class parents take a more rigid view of authority; they are more likely to expect their children to conform their behavior to externally imposed rules of conduct than middle-class parents, who are more concerned with the child's development of an internalized moral code. Working-class parents may also feel greater deference toward educators, because of their lower position in society. Working class parents want their children to succeed, just as middle-class parents do. But educational achievement may appear to be more difficult to them than it does to middle-class parents, who, after all, have themselves advanced through the educational system. If working-class parents think that success in school is important, yet difficult and somewhat mysterious, they might insist more strongly on rigid observance of school rules. Conversely, if school seems less mysterious and academic success more routine to higher status children, they might see less need to observe school rules rigidly. To them, the consequences of small violations may not appear to be as serious. The implications of this hypothesis are consistent with the findings presented, though it cannot be given a definitive test with the High School and Beyond data.

However, the related hypothesis that parents might be less inclined to teach respect for school if they themselves have not found it useful in their own accomplishments can be examined. Two groups of parents who might be more likely than other parents to feel this way can be identified. All other things being equal, we might hypothesize that high-income parents with low education would be less likely to feel a deep respect for educational institutions; they were able to achieve material success without the help of school. In addition, parents who failed to achieve economically even though they have impressive educational credentials might also have lower respect for school.

To test this hypothesis, the results of a tabulation of the percent of sophomores who say they cut class, classified by father's education and family income, are presented in table 3.10. This form of misbehavior was chosen as an illustration. The figures show that status inconsistency, this time a characteristic of fathers, is apparently related to misbehavior in the school by the child. The highest percentages in the table are not found in the upper left corner, as would occur if misbehavior were greatest among students from the humblest socieoeconomic background (the reader will recall from table 3.4 that the percentage of sophomores who cut class in the lowest income category was higher than the rate in five of the remaining six income categories). Instead, three of the four cells in the upper left corner are smaller than three quarters of the other entries in the table. At the other extreme, the four largest entries in the table are located in the lower left and upper right corners, the lower left containing children with highly educated fathers but low family incomes, and the upper right containing sophomores with poorly educated fathers and high family incomes. The interaction between income and father's education is weak, however, and the number of cases in the extremes of the table are small.

A replication of the results for sophomores would increase the credibility of those findings despite the small sample size. The results for seniors, in table 3.11, are very similar to those in table 3.10. Again the percentages of students from the upper left cells--those from the poorest

Table 3.10.--Percent of sophomores who report that they cut class, by father's education and family income: Spring 1980

Father's education	Family income						
	$6,999 or less	$7,000-11,999	$12,000-15,999	$16,000-19,999	$20,000-24,999	$25,000-37,999	$38,000 or more
Less than high school ...	26.18 (410)1/	26.84 (737)	28.92 (862)	28.73 (837)	32.48 (617)	34.19 (345)	40.92 (201)
High school graduation ..	33.04 (231)	25.98 (617)	26.73 (1,113)	27.30 (1,264)	27.07 (1,116)	30.62 (651)	30.49 (414)
Vocational, less than 2 years	35.66 (27)	27.02 (56)	30.09 (120)	23.02 (138)	29.68 (137)	29.99 (92)	51.48 (52)
Vocational, 2 or more years	31.49 (44)	20.40 (52)	21.71 (190)	29.67 (210)	33.88 (220)	26.63 (161)	40.15 (104)
College, less than 2 years	23.55 (32)	26.47 (65)	26.83 (168)	25.58 (201)	29.04 (242)	35.81 (166)	28.38 (107)
College, 2 or more years (includes 2 year degree)	41.94 (25)	22.71 (56)	28.33 (192)	26.70 (250)	28.95 (250)	35.17 (210)	31.07 (151)
College, 4 or 5 year degree	56.23 (19)	37.02 (97)	22.37 (199)	29.35 (349)	27.31 (428)	24.28 (489)	29.52 (532)
Master's degree or equivalent	54.41 (5)	26.51 (35)	25.54 (103)	25.07 (177)	28.86 (226)	24.14 (291)	28.91 (308)
Ph.D., M.D., or other advanced degree	0.00 (10)	56.88 (13)	36.08 (43)	31.69 (79)	26.24 (121)	24.01 (172)	31.40 (432)

NOTE: Variables are defined in appendix A. Table entries were calculated using student weights.

1/ Sample sizes are in parentheses.

Table 3.11.--Percent of seniors who report that they cut class, by father's education and family income: Spring 1980

Father's education	Family income						
	$6,999 or less	$7,000-11,999	$12,000-15,999	$16,000-19,999	$20,000-24,999	$25,000-37,999	$38,000 or more
Less than high school ...	34.60 (524) 1/	34.92 (812)	40.01 (960)	43.05 (927)	47.76 (720)	45.93 (455)	52.59 (233)
High school graduation ..	31.38 (242)	37.94 (558)	39.75 (1,043)	42.63 (1,260)	42.89 (1,207)	46.05 (891)	53.06 (475)
Vocational, less than 2 years	28.24 (20)	38.30 (64)	42.87 (133)	42.57 (154)	51.54 (163)	55.85 (122)	44.14 (59)
Vocational, 2 or more years	31.65 (24)	45.81 (100)	39.98 (175)	48.86 (244)	43.34 (243)	42.38 (210)	56.22 (123)
College, less than 2 years	36.69 (31)	41.74 (95)	42.19 (185)	41.10 (226)	44.17 (291)	44.39 (276)	57.35 (157)
College, 2 or more years (includes 2 year degree)	46.93 (24)	42.88 (74)	48.00 (146)	46.86 (205)	43.97 (275)	50.06 (248)	56.84 (188)
College, 4 or 5 year degree	53.46 (25)	39.64 (83)	41.16 (200)	39.11 (287)	42.27 (459)	42.98 (623)	50.02 (673)
Master's degree or equivalent	48.45 (14)	37.55 (27)	56.46 (84)	48.91 (144)	46.55 (254)	44.34 (351)	53.63 (389)
Ph.D., M.D., or other advanced degree	.53 (7)	42.83 (13)	34.29 (32)	43.07 (50)	41.75 (93)	49.16 (182)	50.26 (480)

NOTE: Variables are defined in appendix A. Table entries were calculated using student weights.

1/ Sample sizes are in parentheses.

socioeconomic backgrounds--are among the smallest in the table. The greater the education of fathers in low-income families, the higher the percentage of students who cut class. Students from high-income families have high rates of class-cutting as we saw in table 3.5. The level of father's education has no effect on class-cutting at the high end of the income distribution for seniors.

The results, in brief, provide some support for the hypothesis. Sophomores from families with highly educated fathers but low family income are more likely to cut class than those from low-income families with poorly educated fathers. The same is true for seniors. Sophomores from high-income families in which the father is poorly educated are more likely to cut class than those from high-income families in which the father is highly educated. For seniors from high-income families the education of the father makes no difference. But we must stress again that the interaction between income and father's education is weak. Any conclusion regarding the above hypothesis can at best be considered tentative.

3.2.5. Ethnic and Racial Differences in Misbehavior

Table 3.12 shows that Hispanic sophomores are more likely than blacks or whites to commit one of the five types of misbehavior about which we have information. Both Hispanic males and females have high rates of absenteeism and are more likely than members of the other ethnic groups of the same sex to report that they cut class, don't do assigned homework, or have been in serious trouble with the law. Black males are late more often than other subgroups defined by sex and ethnicity and fall between white and Hispanic males in their rates of absenteeism, not doing assigned homework, cutting class, and having been in serious trouble with the law. Black sophomore females have higher rates of absenteeism and tardiness than white or Hispanic females; their rates of class-cutting also fall in the middle.

Table 3.12.—Rates of selected types of misbehavior reported by sophomores, by sex and ethnicity: Spring 1980

Sex and type of misbehavior	Ethnicity		
	Hispanic	Black	White and other
All sophomores:			
Sample size	3,479	3,250	18,255
Days absent (mean)	3.82 (5.16)1/	2.98 (4.41)	2.78 (4.11)
Days late (mean)	3.06 (4.70)	3.17 (4.73)	2.29 (4.11)
Cuts class (percent)	35.05	32.41	29.13
Doesn't do assigned homework (percent).	5.99	3.27	4.46
Has been in serious trouble with the law (percent)	5.90	5.23	5.23
Males:			
Sample size	1,469	1,282	8,469
Days absent (mean)	3.72 (5.04)	3.11 (4.57)	2.86 (4.37)
Days late (mean)	3.36 (5.13)	3.64 (5.31)	2.45 (4.40)
Cuts class (percent)	38.29	36.81	30.37
Doesn't do assigned homework (percent).	8.77	4.87	6.91
Has been in serious trouble with the law (percent)	9.50	9.24	8.31
Females			
Sample size	1,716	1,580	9,058
Days absent (mean)	3.91 (5.29)	2.89 (4.27)	2.71 (4.10)
Days late (mean)	2.78 (4.25)	2.78 (4.16)	2.13 (3.79)
Cuts class (percent)	32.35	29.15	27.88
Doesn't do assigned homework (percent).	3.40	1.90	2.18
Has been in serious trouble with the law (percent)	2.65	2.06	2.37

NOTE: Variables are defined in appendix A. Table entries were calculated using student weights.

1/ Numbers in parentheses are standard deviations.

Black seniors are, in contrast, the best behaved of the three groups. Table 3.13 shows that black senior males have the lowest average absenteeism and lowest rates of not doing homework, cutting class, and legal trouble. Black senior females are in some cases the lowest group and in others the middle group. Hispanic seniors, like Hispanic sophomores, have higher rates of misbehavior than blacks or whites.

3.2.6 Presence of Parents and Misbehavior

Family structure is also an important determinant of misbehavior, as can be seen in tables 3.14 and 3.15. We tabulated rates of misbehavior separately for students who had both mother (or female guardian) and father (or male guardian) living in the home with them at the time of the survey and those who did not. Sophomores and seniors of both sexes who had both parents present in the home had consistently lower rates of misbehavior than students with one or both parents missing.

3.3 A Model Relating Misbehavior, Homework, Grades, and Educational Expectations to Student, Family, and School Characteristics

These tabular analyses of misbehavior rates by student and family characteristics are useful in that they permit straightforward descriptive comparisons by sex and educational cohort. However, such analyses do not attempt to isolate the independent effects of various student, family or school characteristics on misbehavior. A more sophisticated approach requires developing a conceptual model that is complete enough to avoid gross misspecification of effects and to take account of an hypothesized causal structure.

Both the literature discussed earlier in this report and the analyses just presented make it clear that an analysis of student misbehavior that ignores the causal structure among student behavioral variables is inadequate. It

Table 3.13.--Rates of selected types of misbehavior reported by seniors, by sex and ethnicity: Spring 1980

Sex and type of misbehavior	Ethnicity		
	Hispanic	Black	White and other
All seniors:			
Sample size	3,137	3,192	17,943
Days absent (mean)	3.91 (4.92)1/	3.30 (4.43)	3.40 (4.44)
Days late (mean)	3.65 (5.30)	3.40 (4.78)	3.22 (5.13)
Cuts class (percent)	46.86	39.42	45.26
Doesn't do assigned homework (percent).	5.32	2.37	4.27
Has been in serious trouble with the law (percent)	4.93	2.96	3.93
Males			
Sample size	1,372	1,235	8,487
Days absent (mean)	4.04 (5.08)	3.28 (4.36)	3.49 (4.59)
Days late (mean)	3.99 (5.68)	3.71 (5.03)	3.53 (5.43)
Cuts class (percent)	51.76	45.38	49.34
Doesn't do assigned homework (percent).	8.38	3.63	7.24
Has been in serious trouble with the law (percent)	8.15	5.10	6.81
Females			
Sample size	1,615	1,704	9,070
Days absent (mean)	3.78 (4.74)	3.32 (4.56)	3.30 (4.29)
Days late (mean)	3.29 (4.85)	3.15 (4.56)	2.92 (4.81)
Cuts class (percent)	41.77	34.98	41.45
Doesn't do assigned homework (percent).	2.21	1.42	1.54
Has been in serious trouble with the law (percent)	1.59	1.33	1.25

NOTE: Variables are defined in appendix A. Table entries were calculated using student weights.

1/ Numbers in parentheses are standard deviations.

Table 3.14.--Rates of selected types of misbehavior reported by sophomores, by sex and whether both parents live with student: Spring 1980

Sex and type of misbehavior	Both parents present[1]	
	Yes	No
All sophomores:		
Sample size	23,609	6,513
Days absent (mean)	2.63 (4.05)[2]	3.83 (5.16)
Days late (mean)	2.25 (4.01)	3.27 (5.02)
Cuts class (percent)	28.32	36.49
Doesn't do assigned homework (percent)	4.04	5.89
Has been in serious trouble with the law (percent)	4.70	7.43
Males:		
Sample size	10,717	2,663
Days absent (mean)	2.71 (4.20)	3.91 (5.18)
Days late (mean)	2.44 (4.36)	3.57 (5.37)
Cuts class (percent)	29.94	39.46
Doesn't do assigned homework (percent)	6.29	8.99
Has been in serious trouble with the law (percent)	7.53	12.35
Females		
Sample size	11,431	3,168
Days absent (mean)	2.56 (3.89)	3.78 (5.15)
Days late (mean)	2.07 (3.62)	3.02 (4.70)
Cuts class (percent)	26.78	34.08
Doesn't do assigned homework (percent)	1.90	3.39
Has been in serious trouble with the law (percent)	2.07	3.34

NOTE: Variables are defined in appendix A. Table entries were calculated using student weights.

[1] Both parents in the household refers to either the father or male guardian and the mother or female guardian living in the student's household.

[2] Numbers in parentheses are standard deviations.

Table 3.15.--Rates of selected types of misbehavior reported by seniors, by sex and whether both parents live with student: Spring 1980

Sex and type of misbehavior	Both parents present[1]	
	Yes	No
All seniors:		
Sample size	21,959	6,397
Days absent (mean)	3.24 (4.30)[2]	4.14 (5.06)
Days late (mean)	3.15 (5.03)	3.71 (5.35)
Cuts class (percent)	43.88	48.31
Doesn't do assigned homework (percent).	4.07	4.36
Has been in serious trouble with the law (percent)	3.59	5.11
Males:		
Sample size	10,250	2,678
Days absent (mean)	3.36 (4.51)	4.12 (4.99)
Days late (mean)	3.47 (5.35)	4.01 (5.61)
Cuts class (percent)	48.16	53.28
Doesn't do assigned homework (percent).	6.19	7.30
Has been in serious trouble with the law (percent)	6.28	8.76
Females		
Sample size	10,923	3,242
Days absent (mean)	3.12 (4.08)	4.16 (5.13)
Days late (mean)	2.85 (4.68)	3.45 (5.10)
Cuts class (percent)	39.89	44.04
Doesn't do assigned homework (percent).	1.48	1.87
Has been in serious trouble with the law (percent)	1.10	1.97

NOTE: Variables are defined in appendix A. Table entries were calculated using student weights.

[1] Both parents in the household refers to either the father or male guardian and the mother or female guardian living in the student's household.

[2] Numbers in parentheses are standard deviations.

would also be inadequate to limit a model to characteristics of the individual student. The effects of the school context must also be considered. The complexity of a phenomenon like school conduct, however, is such that a conceptual model describing it necessarily becomes complex also.

Consider, for example, the difficulty of interpreting just the relationship between misbehavior and high school grades. Delinquency has most often been seen in the social science literature as a response to the perceived closing-off of opportunities for a successful career resulting in part from poor grades. However, one can also construct a persuasive case for the reverse relationship which takes into account the fact that performance in school is not entirely due to ability. The directives of teachers (to do homework and to do it well, to pay attention in class) are rules, similar in form to disciplinary rules. Students can also express a rebellious attitude through violations of academic rules. Furthermore, violating attendance rules ought to affect a student's performance because of the resultant decrease in exposure to instruction. Hence it seems reasonable to suppose that poor performance in school can be a result as well as a stimulant of misbehavior and delinquency.

In the same way, while students with low educational expectations may be motivated by their lack of commitment to the school system to misbehave, this misbehavior may intensify the low commitment and further depress the educational expectations of such students. Moreover, to the extent that educational expectations are modified by high school performance, any effect of misbehavior on grades would indirectly operate to reduce these expectations. It is clear that to make more than superficial comments on either the origins or impact of misbehavior, it is necessary to place misbehavior in both a conceptual and causal context, and then apply an analytic technique that, within the limits of current technology and the available data, captures the richness of that context as completely as possible.

The model presented in figure 3.1 emphasizes the fact that while misbehavior may be the phenomenon of primary interest to readers of this report, other student behaviors and attitudes which affect misbehavior (and are in turn affected by it) cannot be ignored either theoretically or in the estimation procedures.

The model specifies that four student behavioral variables are jointly determined: misbehavior, hours of homework, high school grades, and present educational expectations. The mutual relations among these characteristics, suggested in the discussion above, and their common causal structure complicate the estimation process.

There are four classes of predetermined variables in the model: (a) background characteristics of the student's family, which include social and economic status, family structure, and the involvement of the parents in monitoring the student's academic and non-academic life; (b) the student's academic potential and early educational expectations; (c) the disciplinary climate of the school; and (d) two facets of the academic context of the school, specifically the level of homework assigned in the school and the school's grading policy.

The High School and Beyond data pose difficulties for the analysis suggested by figure 3.1. While the design of the study is longitudinal, only the first phase of data collection has been completed. This restriction creates difficulties in determining the correct causal ordering of school outcomes. A simultaneous equations approach was therefore judged to be the most appropriate approach to these data. Estimates of model parameters were obtained through the use of two-stage least squares.

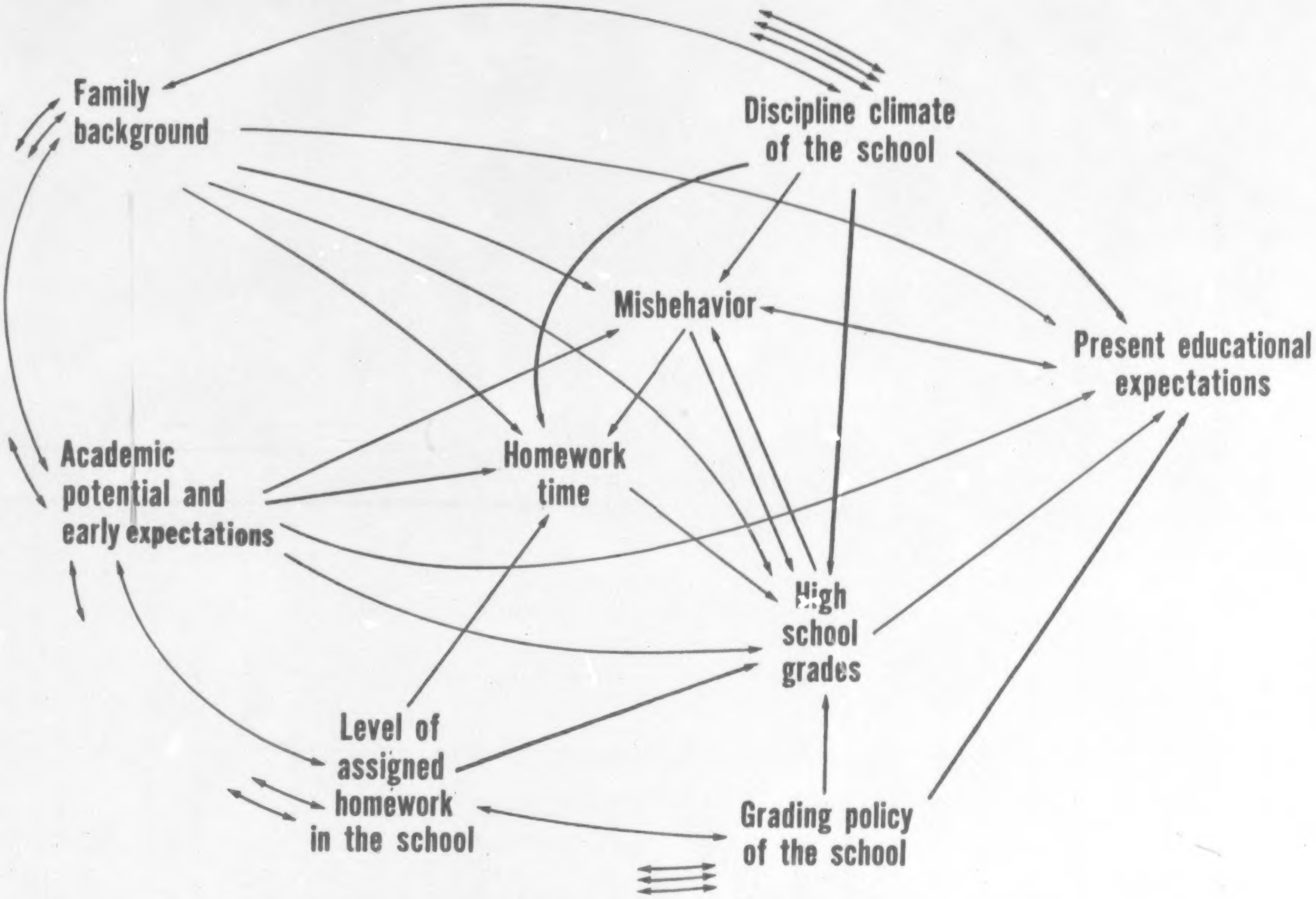
Family background
Discipline climate of the school
Misbehavior
Present educational expectations
Academic potential and early expectations
Homework time
High school grades
Level of assigned homework in the school
Grading policy of the school

Figure 3.1. Proposed causal ordering of school outcomes, school context, and background characteristics.

This analysis was performed on the sophomore cohort only because of the need to come as close as possible to measuring each student's academic potential and early educational expectations as they were before the student began high school. The only possible measure we have for academic potential is the test scores. They clearly reflect learning as well as ability. Because of this fact, as measures of ability, test scores are less contaminated for sophomores than seniors. They would serve rather as exogenous measures of ability for high school seniors, who have already spent three and one-half years in high school, however. Male and females were analyzed separately.

3.3.1 The Misbehavior Scale

The use of a single measure of misbehavior in estimating the model poses difficulties in view of the subtleties brought out by the delinquency literature in recent years. Several studies have made clear that there is a distinction between actions taken by a particular individual and the social meaning given to those actions. The violation of school rules or the law, the perception that other students see oneself as a violator of rules, and the labelling of the student as a disciplinary problem by the school or legal authorities--these are conceptually distinct events, much as they might be associated empirically. Another important issue concerns the location of the rule violation. Should delinquency outside of the school be distinguished from misbehavior within school? To the extent that the activities in the two spheres are motivated by different concerns, maintaining of the distinction is important.

Against these concerns must be placed the limitations of the available survey data. The High School and Beyond study includes questions on several aspects of misbehavior including activities, self-perception, punishment by the school, and trouble with the law. The coverage of each separate topic, however, is thin. Furthermore, as the measures are often dichotomous, their use in a structural equations model presents statistical difficulties. In order to deal with the limitation of the High School and Beyond data, a general measure of misbehavior was formed by constructing a scale from the following questions: whether the student cuts class "every once in a while," whether he or she has been in serious trouble with the law, and whether the student feels that other sophomores see him or her as "very" much (as opposed to "somewhat" or "not at all") a troublemaker. Of those items concerned with misbehavior, only this subset had acceptable scaling properties. The relationships among these items and coefficients describing the scaling properties of these items are presented in table 3.16. These items form a Guttman scale with acceptable levels of reproducibility and scalability.

3.3.2 Parameter Estimates for Effects on Misbehavior

The labels "Family Background" and "Academic Potential and Early Expectations" in figure 3.1 each represent several variables. The following aspects of family background were included. The student's ethnicity was measured by dummy variables. "Hispanic" equalled "1" if the student was Hispanic and "0" otherwise, "black" was coded "1" if the student was black. "Father's education" was measured by three dummy variables: "Professional" was coded "1" if the father worked in a professional or management occupation, "Farm" was coded "1" if he worked in a farm occupation. The dummy variable representing a white-collar job was dropped to insure identifiability. "Family income" was given the value of the midpoint of the interval chosen by the student in the High School and Beyond survey. "Father present" was coded "1" if either the father or a male guardian lived with the student at the time of the survey; "Mother present" was coded "1" if the mother or female guardian lived with the student at that time.

Table 3.16.--Correlation coefficients and measures of scalability for items used to create a misbehavior scale for sophomores: Spring 1980

	Seen as troublemaker	Has been in serious trouble with the law	Cuts class
Seen as troublemaker ...	1.00	0.13	0.12
Has been in serious trouble with the law	0.13	1.00	0.15
Cuts class	0.12	0.15	1.00

Coefficient of reproducability:	Coefficient of minimum marginal reproducability	Coefficient of scalability
0.97	0.87	0.74

NOTE: Variables are defined in appendix A. Table entries were calculated using student weights. The number of cases used in the calculation of each coefficient may differ slightly from the total number of sophomores (30,263) due to item nonresponse.

In addition to measures of family social status and structure, two measures of the parents' involvement in monitoring the student's academic and non-academic life were included as family background variables. Although some of the variability in these variables is probably already captured by the measures of social status, their inclusion follows suggestions in the literature that aspects of family life that affect misbehavior be measured as directly as possible. "Parents do not know" was coded "1" if the student reported that his or her parents did not almost always know where he or she was and what he or she was doing; "Parents do not monitor" was coded "1" if the student indicated that neither parent kept close track of his or her progress in school.

There are three measures of academic potential: scores on the mathematics (Math score) and vocabulary (Verbal score) tests and whether the sophomore was in an academic curriculum (Academic program). Sophomores in the High School and Beyond study were asked whether they had expected to go to college in each of the previous four grades. The number of years for which each student expected to go to college was summed and used as a measure of "Early educational expectations."[1]

In addition to the effects of these variables, misbehavior is influenced by characteristics of the school. Two aspects of the disciplinary climate of the school were included: The proportion of other sample sophomores in the school who indicated in the survey that they cut class was computed as a measure of misbehavior in the student's high school environment (Class-cutting--context). The percentage of sample sophomores in the school who said that hall passes were required in their school was used as an indicator of the school's involvement in controlling the movement of students (Perception that hall passes are required). Finally, in light of the above arguments predicting a relationship between grades and misbehavior, the grades each sophomore had earned so far in high school were included (Grades).[1] As students of education know, a B in one school does not necessarily have the same meaning as a B in another. Schools differ in their grading standards. In order to make meaningful comparisons among high schools, we also included for each student the average of the transformed "Grades" variable for other sample sophomores in the school (Grades--context).

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[1] Ideally, we wanted variables that measured the academic potential and educational expectations of the student before he or she started high school. This information is unfortunately not available in the High School and Beyond Study. Since the sophomores had not been in high school for a long time, we felt that their test scores could be used as proxies for their ability before coming to high school. The sample sophomores were asked whether they had planned to go to college in each of the past four years. For sophomores these four years primarily refer to time before high school. Therefore, these responses indicate the student's early educational expectations--leaving the problem of accurate recall aside for the time being. As the reader can see, a comparable strategy would not be as successful for seniors.
This is the main reason for restricting this analysis to the sophomore cohort. A second reason is that the "troublemaker" item does not exist on the senior questionnaire.

Table 3.17 presents the means and standard deviations for each of the variables in the model and the correlations between each of them and the misbehavior scale. The parameter estimates for the model for sophomore males is presented in table 3.18 The results support the following conclusions.

First, the disciplinary climate of the school as reflected in the bahavior of classmates has a powerful influence on a student's misbehavior: the effect of "Class-cutting--context" is the single largest in the model. An increase of one standard deviation (about 18 percentage points) in the proportion of sophomores who cut class is associated with an increase of about

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[1] "Mostly A's" was set equal to 3.29, "about half A's and half B's" was set equal to 1.53, and so forth, down to "mostly D's," which was given the value -5.50. This transformation of the ordinal "Grades" score incorporates suggestions for such transformations made by Mosteller and Tukey (1978).

Table 3.17.--Means, standard deviations, and correlations with a misbehavior scale for variables in a model relating misbehavior, hours of homework, high school grades, and present educational expectations to selected student family background and school characteristics for sophomores, by sex: Spring 1980

Concept in the model	Status in the model	Variable	Sex					
			Male			Female		
			Mean	Standard deviation	Correlation with misbehavior scale	Mean	Standard deviation	Correlation with misbehavior scale
Family background	Predetermined	Ethnicity:						
		Hispanic	0.097	0.30	0.045	0.092	0.2	0.036
		Black	0.14	0.34	0.014	0.15	0.35	-0.015
		Father's education	12.83	2.13	-0.034	12.68	2.15	-0.0095
		Father's occupation:						
		Professional	0.20	0.40	-0.021	0.18	0.39	-0.012
		Blue collar	0.38	0.49	0.0036	0.37	0.48	-0.021
		Farm	0.039	0.19	-0.019	0.034	0.18	-0.040
		Family income	21805.	11671.	0.00036	19849.	10785.	0.045
		Father present	0.82	0.38	-0.068	0.80	0.40	-0.049
		Mother present	0.93	0.26	-0.081	0.94	0.24	-0.045
		Parents do not know	0.23	0.42	0.23	0.14	0.34	0.21
		Parents do not monitor	0.091	0.29	0.12	0.10	0.30	0.10
Disciplinary climate of the school	Predetermined	Percent who think hall passes are required	0.76	0.27	-0.0010	0.76	0.27	-0.027
		Class-cutting--context	0.31	0.18	0.21	0.30	0.18	0.27
Level of assigned homework in the school	Predetermined	Homework--context	3.93	1.22	-0.049	3.98	1.24	-0.026
Grading policy of the school	Predetermined	Grades--context	-0.045	0.55	-0.083	-0.048	0.56	-0.051
Academic potential and early expectations	Predetermined	Math scores	9.62	4.17	-0.17	9.23	3.94	-0.11
		Verbal score	3.70	1.91	-0.13	3.70	1.91	-0.071
		Early educational expectation	1.65	1.67	-0.13	1.86	1.67	-0.099
		Academic program	0.30	0.46	-0.15	0.34	0.47	-0.12
Present educational expectations	Jointly determined	Present educational expectations	14.41	2.27	-0.20	14.55	2.25	-0.14
Homework time	Jointly determined	Hours of homework	3.56	3.14	-0.20	4.30	3.24	-0.20
High school grades	Jointly determined	Grades	-0.28	1.78	-0.093	0.14	1.74	-0.25
Misbehavior	Jointly determined	Misbehavior scale	0.44	0.65	1.00	0.33	0.54	1.00

NOTE: Variables are defined in appendix A. Table entries were calculated using student weights. The number of cases used in the calculations may differ slightly from the total number of sophomore males (13,459) and sophomore females (14,634) due to item nonresponse.

Table 3.18.--Parameter estimates for a model relating misbehavior, hours of homework, high school grades, and present educational expectations to student family background and school characteristics, for sophomore males: Spring 1980 1/

Independent variables	Dependent variable							
	Misbehavior scale		Hours of homework		Grades		Present educational expectations	
	Coefficient	t-value	Coefficient	t-value	Coefficient	t-value	Coefficient	t-value
Intercept	0.301	3.8	-1.47	-5.4	-1.18	-8.7	11.33	87.5
Ethnicity:								
Hispanic	0.006	0.3	0.20	2.5	0.033	0.6	0.29	6.0
Black	-0.080	- 4.5	0.51	5.5	0.099	1.9	0.47	10.5
Father's education	0.006	2.1	0.10	7.2	-0.022	-2.0	0.17	19.8
Father's occupation:								
Professional	0,015	1.1	0.023	0.3	0.049	1.1	0.11	2.6
Blue collar	-0.008	- 0.7	0.064	1.1	0.020	0.6	-0.056	- 1.6
Farm	-0.035	- 1.3	0.23	1.5	0.101	1.2	-0.51	- 6.8
Family income	0.000003	6.4	0.0000046	1.5	-0.000004	-2.1	0.000014	9.5
Father present	-0.043	- 3.7	--* 2/	--*	--*	--*	-0.028	- 0.7
Mother present	-0.107	- 5.4	--*	--*	--*	--*	0.017	0.3
Parents do not know	0.264	16.7	-0.84	-4.0	--*	--*	--*	--*
Parents do not monitor	0.146	7.1	-0.57	-4.0	--*	--*	-0.036	- 0.6
Percent who think hall passes are required	-0.001	- 0.1	--*	--*	--*	--*	--*	--*
Class cutting--context	0.708	24.1	-0.11	-0.2	0.205	1.3	0.80	5.7
Homework--context	--*	--*	0.55	25.9	-0.475	-15.9	--*	--*
Grades--context	0.028	1.6	--*	--*	0.727	23.6	-0.17	- 4.9
Math score	-0.008	- 2.4	0.075	5.5	0.097	18.2	--*	--*
Verbal score	-0.009	- 2.2	0.013	0.7	0.095	9.4	--*	--*
Early educational expectations	-0.016	- 3.4	0.22	9.3	--*	--*	0.35	31.6
Academic program	-0.067	4.2	0.94	10.7	--*	--*	0.55	14.4
Grades	-0.055	- 2.3	--*	--*	--*	--*	0.56	16.2
Hours of homework	--*	--*	--*	--*	0.522	12.5	--*	--*
Misbehavior scale	--*	--*	0.40	0.6	-0.181	- 1.0	-0.64	- 4.2
R^2	.14		.19		.24		.44	

NOTE: Variables are defined in appendix A. Table entries were calculated using student weights. The number of cases used in the calculations differs slightly from the total number of sophomore males (13,459) due to item nonresponse. T-values have been corrected for item nonresponse as described in the technical note to chapter 1.

1/ Estimates were obtained using two stage least squares.

2/ An asterisk (*) indicates a variable omitted from a given equation due to its status in the causal model presented in figure 3.1.

one-fifth of a standard deviation on the misbehavior scale.

Second, both involvement in an academic curriculum and consistently high early educational expectations are associated with a lower misbehavior score. Scores on the math test and the verbal test are more weakly associated with misbehavior, the better scores implying better conduct. Good grades in high school also reduce misbehavior. But, after other factors in the model are controlled, the effect of grades on misbehavior is not as strong as the tabular analysis of table 3.3 suggested.[1]

Third, the involvement of parents in monitoring their children's behavior, even when crudely measured, is a powerful predictor of misbehavior, much more so than the socioeconomic position of the family. Sophomore males who say their parents often don't know their whereabouts will have scores .26 (.40 standard deviations) higher on the misbehavior scale, while those who say their parents don't monitor their schoolwork will have scores on the average .15 (.23 standard deviations) higher. Together, then, these two variables can cause a change of almost one half a point (.77 standard deviations) on the misbehavior scale. Column 1 of table 3.18 shows that, when other factors are controlled for, males from higher income families clearly are more likely than those from lower income families to misbehave. The effect is modest, however.

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[1] Test scores should obviously have an effect on high school grades. The role of test scores in affecting the other three outcomes in the model, namely misbehavior, homework, and educational expectations, is less clear. Students, after all, are aware of their potential for achievement primarily through earlier success in attaining good grades. Furthermore, early performance would seem to be a much better measure of a student's academic commitment than present test scores. By this reasoning, test scores should not directly affect misbehavior, homework, or present educational expectations, however strong their indirect effects. A contrary argument is that test scores are needed in the model as surrogates for early grades, which we have no direct measure for. We estimated the model first assuming that test scores affect only grades, and then assuming that test scores also affect misbehavior. The omission of test scores results in estimating a large effect of high school grades on misbehavior, as might be expected. With test scores removed, a change from an A to a C average implies a one third point (.55 standard deviation) increase on the misbehavior scale.

A rise in income of $10,000 implies only a .03 rise (.05 standard deviations) on the misbehavior scale. The occupation of the student's father is not significantly related to misbehavior. The education of the student's father is slightly more important than his occupational status, but its effect is still very small and not significant.

The presence or absence of parents is more important. A sophomore male whose mother is present has a predicted misbehavior value that is .11 lower (.17 standard deviations) than that of a sophomore whose mother doesn't live with him. The effect of the presence of the father is smaller, but also statistically significant. Finally, the reader can note that, in contrast to the results of table 3.12, when other factors are controlled for, Hispanic males have the same level of misbehavior as White males, and Black males have somewhat lower levels of misbehavior than males in the two other groups.

3.3.3 Parameter Estimates for Effects on Hours of Homework

We hypothesized that misbehavior could influence academic performance in high school as measured by grades in two ways: directly, and indirectly by affecting the student's willingness to do homework, measured as the number of hours the student said he or she spends on homework a week. The equation predicting the number of hours per week spent on homework includes the family social status variables. Since misbehavior in a school where rule-breaking is rare can have a different meaning from misbehavior in a school where rule-breaking is common, the variable "Class-cutting--context" was also included. One of the most important determinants of the amount of homework done by a student would obviously be the amount assigned. Since this information was not available we used as a proxy the average amount of homework done by other sample sophomores in each school (Homework--context).

The second column of table 3.18 shows that the most important influence on the time a student spends doing homework is the average amount of homework done in the school, as might be expected. Early educational expectations and placement in an academic track have strong effects on the amount of homework done, as do measures of family background such as father's education, family income, and parental monitoring of the student's progress in school.

Whether parental knowledge of the student's whereabouts should be directly entered into the homework equation was not easy to determine. It could be argued that the monitoring of school performance is more directly tied to the amount of homework done, while the monitoring of out-of-school activity is more directly tied to the question of delinquency outside the school. An argument for the inclusion of this item would be that parental neglect, as evidenced by the students' reporting that parents often did not know how they spent time outside of school, could have a direct effect on schoolwork. An adolescent might respond to this neglect by rebelling against parental academic expectations, without actually engaging in conduct that could bring on punishment from authority figures outside the home. Furthermore, if parents do not monitor a student's activities outside of school, they are less likely to be able to influence the amount of homework done in that time. With this variable out of the equation, the misbehavior scale has a significant effect on homework in the expected direction. With "Parents do not know" included, as in table 3.18, the direct effect of misbehavior is unimportant.

3.3.4 Parameter Estimates for Effects on Grades

In addition to measures of family social and economic status and the test scores, the misbehavior scale was included in order to test two hypotheses: first, students whose negative orientation to high school results in misbehavior might be motiviated to get lower grades than they otherwise would: second, students who miss class, a misbehavior included in the misbehavior scale, might be handicapped in their effort to get good grades. "Hours of homework" was included because of its obvious relation to grades, and "Homework--context" was included because the advantage that doing homework gives a student compared with classmates ought to depend in part on how much more homework he or she does than others. The average grades (Grades--context) of other sophomores in the school were included in order to control for the differences between schools in grading scales. The remaining variables were omitted under the assumption that they affect grades through misbehavior and the amount of homework done, and because of the need to identify the model.

The results of the estimation are shown in column 3 of table 3.18. They reveal that, while the effect of misbehavior on grades is in the expected direction, it is far from statistically significant. Evidently, conduct in school has relatively little effect on academic performance as measured by grades by the time a student has reached high school. These results do not reduce the likelihood that students who have been consistently rebellious over the course of their academic careers may get lower grades in high school than they would have obtained otherwise. In the present model, the effect of early misbehavior would be transmitted through lowered test scores.[1]

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[1] Results from simultaneous equations systems are always sensitive to the specifications used. Thus, if one were to postulate that the amount of homework a student does should affect grades, but that the amount done by other students does not matter, then one would have obtained a significant effect of misbehavior on grades. This specification is implausible, however. The omission of average homework, the proxy for the amount of homework assigned, could be justified only if the amount of homework a student does relative to the amount assigned is unimportant to the determination of grades, which is hard to believe. Furthermore, an estimation using this specification produces the implausible result that time spent on homework has no effect on high school grades.

3.3.5. Parameter Estimates for Effects on Educational Expectations

Finally, we analyzed the relationship between misbehavior and sophomore educational expectations at the time of the High School and Beyond survey. The background variables measuring family social and economic status and family structure were included in the model, along with the variables indicating whether the student was in an academic program, and the strength of his early educational expectations. We also included the measure of the individual's misbehavior and the percentage of sophomores in the school who cut class, as well as the student's grades and the average grades of sample sophomores in the school.

The results of the analysis in table 3.18 show that a male student's early educational expectations are the most powerful predictor of his present educational expectations, and that grades in high school, placement in an academic program, and father's education are also very significant. The results also show that the effect of misbehavior on educational expectations is significant. An increase of one point on the misbehavior scale implies a decrease of two-thirds of a year in educational aspirations.[1]

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[1] The reasons for the omission of test scores and "Parents do not know" are both theoretical and practical. As noted above, students do not know the results of their test scores. They should respond to the measures of academic achievement that they do know about, grades being the principal example. The lack of parental concern suggested by "Parents do not know" is arguably captured somewhat by the inclusion of the misbehavior scale. We did, however, experiment with specifications that included the test scores and "Parents do not know." The inclusion of both test scores and grades simiultaneously left the value of the misbehavior coefficient almost unchanged, but virtually eliminated the effect of grades on present educational expectations. However, the implications of this specification are implausible; eliminating test scores scores from the model, while retaining "Parents do not know" produced an even more negative coefficient for the misbehavior scale, but implied that children of parents who don't keep track of their out-of-school whereabouts have higher educational expectations than their classmates, which also is implausible. Furthermore, the inclusion of too many variables in our models produces multi-collinarity problems.

In summary, the findings for sophomore males show that the involvement of parents in monitoring children's activities, academic potential and early educational expectations, and the academic and disciplinary context of the school are highly significant determinants of misbehavior. Family socioeconomic status has only a minor effect. The effect of grades on misbehavior is statistically significant but modest. Misbehavior, as measured here, has little direct effect on the amount of homework done or on high school grades. Misbehavior relative to one's peers appears to depress present educational expectations significantly.

3.3.6 Estimation of the Model for Sophomore Females

This analysis was repeated for sophomore females. The results of the estimation are shown in table 3.19. The overall pattern of coefficients is similar for males and females. Turning first to the misbehavior equation, the reader can see that, once again, the school environment of the adolescent, measured by "Class-cutting--context" is a strong predictor of misbehavior. High school grades have a stonger effect on misbehavior for high school females than for males, while the effects of test scores, educational expectations and participation in an academic program on misbehavior are weaker than for males. The presence of parents is less important for the females than for the males, while parental monitoring of schoolwork and out-of-school activities is again of great importance in predicting level of misbehavior. Sophomore females from high-income families are, like their male classmates, more likely to misbehave than sophomore females from lower income families, and the effect is somewhat larger for females than for males. Other measures of the socioeconomic status of the family are unimportant. The females are also similar to the males in that Black sophomores have somewhat

Table 3.19.--Parameter estimates for a model relating misbehavior, hours of homework, high school grades, and present educational expectations to student family background and school characteristics, for sophomore females: Spring 1980 1/

Independent variables	Misbehavior scale		Hours of homework		Grades		Present educational expectations	
	Coefficient	t-value	Coefficient	t-value	Coefficient	t-value	Coefficient	t-value
Intercept	0.03	0.6	0.32	1.5	-1.63	-15.8	11.22	92.5
Ethnicity:								
Hispanic	-0.02	-1.2	-0.047	-0.6	-0.03	-0.7	0.39	7.9
Black	-0.07	-5.4	0.12	1.0	0.12	3.1	0.82	19.6
Father's education	0.0006	0.3	0.0084	0.6	0.02	2.6	0.15	18.9
Father's occupation:								
Professional	-0.005	-0.4	0.11	1.5	0.08	2.0	0.016	0.4
Blue collar	-0.013	-1.3	0.10	1.5	0.102	3.4	0.0086	0.3
Farm	-0.05	-2.2	0.17	1.0	0.25	3.5	-0.16	-2.1
Family income	0.000004	9.1	0.0000034	0.7	-4.78 E-07	-0.3	0.000014	9.0
Father present	-0.02	-1.9	--* 2/	--*	--*	--*	-0.03	-0.8
Mother present	-0.04	-2.2	--*	--*	--*	--*	0.012	0.2
Parents do not know	0.24	17.6	-0.58	-1.6	--*	--*	--*	--*
Parents do not monitor	0.09	6.3	-0.61	-4.0	--*	--*	-0.14	-2.7
Percent who think hall passes are required	-0.018	-1.2	--*	--*	--*	--*	--*	--*
Class-cutting--context	0.78	34.8	0.60	0.6	0.26	1.6	0.35	2.3
Homework--context	--*	--*	0.56	18.6	-0.40	-17.1	--*	--*
Grades--context	0.06	5.2	--*	--*	0.63	75.5	-0.12	-4.1
Math score	0.005	1.5	0.10	7.7	0.11	22.3	--*	--*
Verbal score	0.006	2.0	0.0069	0.4	0.12	14.2	--*	--*
Early educational expectations	-0.005	-1.5	0.24	9.6	--*	--*	0.40	38.3
Academic program	-0.052	-4.9	0.85	7.2	--*	--*	0.66	19.0
Grades	-0.086	-4.7	--*	--*	--*	--*	0.045	18.0
Hours of homework	--*	--*	--*	--*	0.039	12.9	--*	--*
Misbehavior scale	--*	--*	-0.73	-0.6	-0.36	-2.0	-0.46	-2.8
R^2	.15		.20		.30		.40	

NOTE: Variables are defined in appendix A. Table entries were calculated using student weights. The number of cases used in the calculations differs slightly from the total number of sophomore females (14,634) due to item nonresponse. T-values have been corrected for item nonresponse described in the technical note to chapter 1.

1/ Estimates were obtained using two stage least squares.

2/ An asterisk (*) indicates a variable omitted from a given equation due to its status in the causal model presented in figure 3.1.

lower levels of misbehavior than Whites and Hispanics, while the scores of the latter two groups are about the same.

Although the estimates of coefficients for the homework equation differ somewhat in detail from those of the males, the essential findings are the same. The most important predictors of hours spent doing homework are the average amount of homework assigned, involvement in an academic program, and early expectations for college. The effect of misbehavior on the amount of time spent on homework is insignificant.

The effect of misbehavior on high school grades is slightly larger for females than it is for males, and in a direction consistent with the above arguments. While the scales on which misbehavior and high school grades are measured differ, the results suggest that the direct effect of grades on misbehavior in high school is greater than the direct effect of misbehavior on grades for both males and females (although of these, only the effect of grades on misbehavior for females is statistically significant). The results also show that, as for males, test scores and time spent on homework are the most important determinants of grades for sophomore females.

Finally, column 4 of table 3.19 shows that the determination of present educational expectations is very similar for both sexes: again, misbehavior reduces educational expectations. The size of the reduction in expectations associated with an increase of a point on the misbehavior scale is about one-half of a year for females, which is slightly smaller than the reduction for males. The most important effects on present educational expectations are the same for females as for males, namely, early educational expectations, grades, and the education of the father. Black female sophomores have present educational expectations nearly a year higher than those of the other ethnic groups in the female sample.

3.4 Conclusion

The results of this chapter make it clear that while misbehavior varies with the socioeconomic status of the family, the relationship is not particularly strong. We have found some evidence that students from the lowest and the highest income families are more likely to get in trouble than are students from middle-income families. Within the group of lowest income students, those who get good grades in school appear to be motivated to misbehave. Even though these students misbehave less than poor students who get lower grades, the reduction associated with academic success is not as great as it is for high-income students. Low-income students with well-educated fathers also apparently have a somewhat stronger motivation to misbehave. Their rates of class-cutting are much higher than those of similarly disadvantaged children whose fathers have educations more in line with their income.

The socioeconomic position of the family is not the most important family influence on misbehavior. The presence of both parents in the home has a stronger inhibiting effect on misbehavior. More important still is whether the parents keep track of their child's activities, both in and out of school.

The tabular analysis shows that there is a very powerful bivariate relationship between academic performance (Grades) and several forms of misbehavior. More detailed causal analysis suggests that the association is apparently not formed in high school, however; rather, it is established earlier in the life course. While academic performance in high school apparently has some direct effect on misbehavior, this effect is much smaller than one might expect from a tabular analysis. Furthermore, the negative orientation to school evidenced by misbehavior in high school has at most a minor direct effect on academic performance. Present educational expectations appear to form much later in the educational career than does a student's academic potential, and expectations are affected more strongly by misbehavior. Sophomores who misbehave tend to form lower educational expectations than whose behavior conforms to the demands of authorities. This relationship persists even when the level of the student's prior academic expectations and academic performance so far in school (Grades) are controlled.

Finally, the results support the hypothesis that the school's academic and disciplinary environment is an important determinant of the misbehavior of its students. Even when many social and economic characteristics of the family and academic performance are controlled, students in schools where class-cutting is widespread tend to misbehave more than students in schools where it is not. Whether the school environment can be influenced by school policies is at this point an unanswered question. In the next chapter, the relationship between the characteristics of a school and the conduct of its students will be examined in more detail.

CHAPTER 4

STUDENT MISBEHAVIOR AND SCHOOL CHARACTERISTICS

High schools differ in levels of student body misbehavior. Furthermore, one of the conclusions presented in chapter 3 suggests that the high school environment influences the behavior of its students. The current chapter will investigate the variation in student misbehavior by important characteristics of high schools.

As noted in chapter 2, the High School and Beyond study includes several different types of measures of the climate of a high school: reports by students of their own behavior, reports by students of the behavior of others in the school, and reports by school administrators about how much of a problem several forms of misbehavior are in the school. All three types of measure are used in this chapter because each provides different information.

This chapter will treat the following topics:

- The first section discusses the implications of the choice of a unit of analysis for exploring the relationship between school characteristics and student misbehavior.
- The second section presents student self-reports of misbehavior by school characteristics, using the student as the unit of analysis. Three of the activities to be discussed in this section--absenteeism, tardiness, and class-cutting--pertain directly to school functioning and are normally grounds for disciplinary action by the school. A fourth misbehavior, refusal to do assigned homework is a form of academic misbehavior, but one still governed by school rules and one with potentially serious consequences. Whether or not the student has been in serious trouble with the law does not specifically refer to misbehavior at school, but is associated with school conduct.

- Section three continues the examination of self-reports of misbehavior, but at the school level: student self-reports are aggregated to characterize the sophomore and senior student bodies of the sampled schools, and the independent effects of school and student body characteristics on school-level measures of student misbehavior are examined.
- The perceptions of sophomores and school administrators of the level of student misbehavior in the high school are compared in section four.
- Section five discusses the effects of school structure on sophomore's perceptions of school problems.
- Section six examines the accuracy of student perceptions of school problems.

4.1 Choosing the Unit of Analysis for Studying the Relationship Between School and Student Characteristics

Student reports about their perceptions of school and about their own behavior can be used to analyze the relationship between student behavior and school characteristics in two different ways. First, the school may be taken as the unit of analysis. In this case, student reports are aggregated to characterize the student body of a school. These aggregated reports can be thought of as constituting "school scores." The number of cases in the analysis is the number of schools, and each school will have a set of student body variables which have been aggregated from students' reports. Second, the student may be taken as the unit of analysis. In this instance, the number of cases in the analysis is the number of students, and all students from a given school have the same value for a school characteristic variable.

The existence of a choice of levels of analysis creates special problems of interpretation. Suppose for instance that one wished to characterize the level of absenteeism in a particular school. The obvious measure of this concept at the school level is, of course, the average level of absenteeism in the school. To compare two schools, one would compare their average levels of absenteeism. But if one wants to compare groups of schools, where the grouping variable is some meaningful school characteristic, complications arise. Suppose one wished to characterize the level of absenteeism at a Type A school, where Type A is some meaningful characteristic. If students in one Type A school are absent an average of 5 days, and in another 3 days, one might say that in the average Type A school students were absent an average of 4 days. Unless the two schools were of the same size, however, it would not be true that the average student in the two Type A schools was absent 4 days. If the first school had 1,000 students and the second 100, then students in the two Type A schools would be absent an average of 4.8, not 4 days.

The different result reflects the use of a different unit. In the first case, both schools are given equal weight, so the behavior of students in the smaller school is given greater weight. In the second case, the grouping of students into schools is ignored in the calculation. All students are weighted equally so that the result gives predominance to the behavior of students in the larger schools.

Since the two methods would give identical results if schools all had the same number of students, the size of the difference in the results given by the two methods depends on the size of the association between school size and the student behavior being examined. If Type A schools had less misbehavior at comparable sizes than Type B schools, but Type A schools tended to be smaller, and small schools had less misbehavior (on a per student basis) than large schools, then a display of average school misbehavior would overstate the difference between Type A and Type B schools.

The choice of a unit of analysis also affects the form that measures, particularly those to be used as dependent variables, can take. In the High School and Beyond study many of the measures of student behavior at the student level were dichotomous or at best, three-point scales. The use of such measures as dependent variables poses statistical problems which, though solvable, are time-consuming and expensive. However, when student reports are aggregated at the school level, it is possible to obtain continuous variables, such as the percent of the student sample who do not do assigned homework. Furthermore, statements about the amount of misbehavior in a school naturally take the school, rather than the individual, as the unit of analysis. While student-level measures could be analyzed, the analysis of school-level measures are more interpretable. In the present analysis, the multivariate analyses were conducted at the school level.

A final issue raised in choosing a unit of analysis is whether some of the descriptions often applied to schools more correctly apply to their students. For example, we use the phrase "urban high school," but the observation that urban schools have more (or less) disorder than suburban schools may more properly be rephrased to read that urban high school students have worse (or better) conduct while in school than suburban high school students. Strictly speaking, our information about communities in the High School and Beyond data applies to the schools rather than the students. The "Type of community" variable refers to the location of the school, not the type of community in which the student lives. The same is true for geographic region, though here the issue is obviously less important.

In some cases, a strong argument might be made for treating such variables as attributes of the school. If, for example, differences between urban and suburban schools can be explained in terms of differences in school characteristics or policy resulting from differences in the structure of urban and suburban school systems, the stock of available teachers, or the lack of available resources, then the type of community might fittingly be considered a school-level indicator of important school differences. If, however, differences between urban and suburban schools result from differences in peer-group cultures, the values of the communities, or other factors affecting the behavior of the students, then any differences in misbehavior between schools in different types of communities must be explained at least in part in terms of the characteristics of their students. In actuality, variables such as "Type of community" are indicators of both school and student characteristics. Ambiguity in interpreting such variables arises from an incomplete understanding about how they might be related to school disorder.

4.2 The Distribution of Self-Reported Misbehavior by High School Characteristics: Student-Level Analysis

4.2.1 Type of Community

A commonplace notion is that levels of misbehavior are greatest in city schools (see, for example, NIE, 1977). In order to investigate this question, we classified schools into three groups. A school is considered "urban" if it is located in a central city of a Standard Metropolitan Statistical Area (SMSA), "suburban" if it is in an SMSA but outside the central city, and "rural" if it is outside an SMSA. The results provide only mixed support for the above generalization.

Urban schools sometimes have higher rates than suburban or rural

Table 4.1.--Rates of selected types of misbehavior reported by sophomores, by type of community: Spring 1980

Type of misbehavior	Type of community		
	Urban	Suburban	Rural
Sample size	6,776	14,872	8,595
Days absent (mean)	3.43 (5.02)1/	2.85 (4.33)	2.69 (3.96)
Days late (mean)	3.16 (4.82)	2.60 (4.33)	1.80 (3.52)
Cuts class (percent)	36.76	31.00	23.57
Doesn't do assigned homework (percent)	4.31	4.37	4.86
Has been in trouble with the law (percent)	5.00	5.30	5.73

NOTE: Variables are defined in appendix A. Table entries were calculated using student weights.

1/ Standard deviations are in parentheses.

Table 4.2.--Rates of selected types of misbehavior reported by seniors, by type of community: Spring 1980

Type of misbehavior	Type of community		
	Urban	Suburban	Rural
Sample size	6,572	13,710	8,205
Days absent (mean)	3.52 (4.76)1/	3.52 (4.56)	3.29 (4.31)
Days late (mean)	3.61 (5.40)	3.66 (5.40)	2.51 (4.40)
Cuts class (percent)	45.56	47.68	38.62
Doesn't do assigned homework (percent)	3.48	3.76	4.94
Has been in trouble with the law (percent)	3.96	4.02	3.97

NOTE: Variables are defined in appendix A. Table entries were calculated using student weights.

1/ Standard deviations are in parentheses.

schools on the five measures of misbehavior and sometimes they do not. Table 4.1 shows that urban schools have the worst-behaved sophomores with regard to the three activities that pertain to attendance in class: urban sophomores are more likely to be absent, to be tardy, and to cut class than are suburban and rural students. (Rural schools have sophomores with the best attendance records. Suburban schools fall in the middle.) But of the three groups, urban students are least likely to report that they refuse to do homework, and they are least likely to have been in trouble with the law. Comparing rates of misbehavior by type of community among seniors, however, gives very different results. Of the three groups, suburban seniors show the highest rates of misbehavior on four of the five measures, including absenteeism, tardiness, and class-cutting; rural seniors are still the most likely to report that they don't do assigned homework; urban seniors are generally more similar to suburban than to rural seniors.

Two differences between the sophomore and senior cohorts are especially salient for the present discussion. Obviously, seniors are generally more mature. In addition, the senior class lacks the many students who have dropped out before their final year in high school. The explanation for the difference in rates of misbehavior between the two cohorts does not affect the conclusions to be drawn from tables 4.1 and 4.2, however. Taking the cohorts together, we find that the attendance of urban students is about the same as that of suburban students. Rural students have the best attendance records, but they are least likely to do assigned homework. Urban students, finally, are least likely to report that they have been in serious trouble with the law.

4.2.2 Type of School

We next constructed comparisons of student self-reports according to whether the students attended public, Catholic, or non-Catholic private schools. Table 4.3 shows that public school sophomores have poorer attendance records than private school sophomores. Public school sophomores have the highest rates of absenteeism, class-cutting, and refusal to do homework. Catholic school sophomore students have by far the lowest level of misbehavior on all five measures. Other private school sophomores have rates of absenteeism, class-cutting, and refusal to do homework that fall between Catholic and public levels, but their rates of tardiness and trouble with the law are higher than the comparable rates for public sophomores. The ordering of senior misbehavior rates by type of school, based on table 4.4, is very similar. However, senior rates of refusing to do homework for public and other private schools are much more similar than were sophomore rates. This is also true of the percentage of seniors who have been in serious trouble with the law.

4.2.3 Geographic Region

Tables 4.5 and 4.6 show that students going to school in different geographic regions of the United States in some cases have very different rates of misbehavior. In general, sophomores in the western part of the United States are most likely to miss class time. Sophomores from Mountain and Pacific states, the most likely to report that they cut class, also have the highest rates of absenteeism and tardiness. Mountain state sophomores are most likely to have reported that they have had serious trouble with the law, but Pacific, West South Central, and South Atlantic sophomores are also higher than average on this form of misbehavior. At the other extreme, East South Central sophomores have the best attendance records, followed by those in the

Table 4.3.--Rates of selected types of misbehavior reported by sophomores, by type of school: Spring 1980

Type of misbehavior	Type of school		
	Public	Catholic	Other[1] private
Sample size	26,461	2,831	985
Days absent (mean)	3.04 (4.50)[2]	1.53 (2.60)	2.46 (3.98)
Days late (mean)	2.50 (4.26)	1.90 (3.70)	3.11 (4.90)
Cuts class (percent)	31.35	11.32	29.16
Doesn't do assigned homework (percent)	4.75	2.30	2.34
Has been in trouble with the law (percent)	5.42	3.68	7.40

NOTE: Variables are defined in appendix A. Table entries were calculated using student weights.

[1] Because of the small school sample size, the heterogeneity of the schools, and the high nonresponse rate for schools in this sector, the estimates for other private schools are not nearly as accurate or as interpretable as those for public or Catholic schools.

[2] Standard deviations are in parentheses.

Table 4.4.--Rates of selected types of misbehavior reported by seniors, by type of school: Spring 1980

Type of misbehavior	Type of school		
	Public	Catholic	Other[1] private
Sample size	24,911	2,697	880
Days absent (mean)	3.57 (4.61)[2]	2.13 (3.22)	2.88 (4.22)
Days late (mean)	3.31 (5.15)	2.73 (4.63)	4.02 (5.63)
Cuts class (percent)	46.11	25.71	39.54
Doesn't do assigned homework (percent)	4.21	2.38	3.97
Has been in trouble with the law (percent)	4.10	2.52	4.14

NOTE: Variables are defined in appendix A. Table entries were calculated using student weights.

[1] Because of the small school sample size, the heterogeneity of the schools, and the high nonresponse rate for schools in this sector, the estimates for other private schools are not nearly as accurate or as interpretable as those for public or Catholic schools.

[2] Standard deviations are in parentheses.

Table 4.5.--Rates of selected types of misbehavior reported by sophomores, by region: Spring 1980

Type of misbehavior	Region								
	New England	Middle Atlantic	South Atlantic	East South Central	West South Central	East North Central	West North Central	Mountain	Pacific
Sample size	1,514	4,774	4,678	1,637	3,458	6,201	2,465	1,588	3,962
Days absent (mean)	2.83[1] (4.36)	3.01 (4.40)	2.75 (4.02)	2.47 (3.75)	2.83 (4.30)	2.79 (4.40)	2.53 (3.87)	4.05 (5.19)	3.52 (5.07)
Days late (mean)	2.73 (4.59)	2.61 (4.46)	2.25 (3.67)	1.71 (3.11)	1.99 (3.69)	2.24 (4.07)	1.88 (3.65)	3.68 (5.36)	3.70 (5.33)
Cuts class (percent)	30.80	32.27	26.26	21.77	24.57	29.11	24.24	45.39	38.63
Doesn't do assigned homework (percent)	4.73	4.63	4.06	4.30	6.58	3.62	4.97	5.13	4.75
Has been in serious trouble with the law (percent)	5.24	4.85	5.67	4.77	5.06	5.29	5.76	6.27	5.77

NOTE: Variables are defined in appendix A. Table entries were calculated using student weights.

[1] Standard deviations are in parentheses.

Table 4.6. --Rates of selected types of misbehavior reported by seniors, by region: Spring 1980

Type of misbehavior	Region								
	New England	Middle Atlantic	South Atlantic	East South Central	West South Central	East North Central	West North Central	Mountain	Pacific
Sample size	1,389	4,346	4,527	1,598	3,263	5,822	2,358	1,497	3,688
Days absent (mean)	3.21 (4.16) 1/	3.39 (4.43)	3.20 (4.05)	3.00 (4.25)	3.25 (4.59)	3.28 (4.60)	3.26 (4.16)	4.54 (5.02)	4.19 (5.01)
Days late (mean)	3.50 (5.20)	3.21 (5.07)	2.96 (4.60)	2.72 (4.53)	2.79 (4.69)	2.86 (4.93)	2.81 (4.61)	4.73 (5.96)	4.71 (6.11)
Cuts class (percent)	40.30	45.35	41.40	37.69	39.99	42.17	42.28	60.18	56.45
Doesn't do assigned homework (percent)	3.47	3.55	3.85	4.21	5.52	4.23	5.10	5.26	3.51
Has been in serious trouble with the law (percent)	3.44	3.44	3.38	3.79	4.05	4.45	4.50	4.74	3.79

NOTE: Variables are defined in appendix A. Table entries were calculated using student weights.

1/ Standard deviations are in parentheses.

West North Central states. The West South Central sophomores have the lowest rates of tardiness and class-cutting. East South Central sophomores are least likely to have responded that they have had trouble with the law. They also have the second lowest rate of not doing assigned homework. The attendance record of seniors shows substantially the same regional pattern, a major exception being that seniors from Eastern states have the lowest rate of trouble with the law, and the rate for Pacific seniors is about average. Mountain seniors lead the list in misbehavior, as do Mountain sophomores.

4.2.4 School Enrollment

Tables 4.7 and 4.8 show self-reported student behavior for seven categories of school size: 0-249, 250-499, 500-749, 750-1,499, 1,500-2,249, 2,250-2,999, and 3,000 and over. Schools were classified according to enrollment information that the school administrator provided on the school questionnaire. From table 4.7, we see that the sophomore measures of misbehavior are generally related to school size in a curvilinear fashion. The mean level of absenteeism of sophomores initially falls with school size. Starting with schools of 500-750 students, however, the rate of absenteeism begins to increase and continues to grow until the largest enrollment category is reached, where it again falls. Rates of tardiness and class-cuting show the same relationship with school size. The rate of refusal to do homework also has a curvilinear relationship with size. Small schools have low rates of students who refuse to do assigned homework. This rate increases with size initially, reaching a peak in schools with 750-1,500 students. Thereafter it declines, reaching its lowest level in the very largest schools. There is no obvious pattern of association between school size and the percentage of students who say they have been in trouble with the law.

Table 4.7.--Rates of selected types of misbehavior reported by sophomores, by school enrollment: Spring 1980

Type of misbehavior	School enrollment						
	0-249	250-499	500-749	750-1.499	1.500-2,249	2,250-2,999	3.000+
Sample size	1,773	3,175	3,232	9,575	6,756	2,711	672
Days absent (mean)	2.86 (4.55)[1]	2.45 (3.68)	2.52 (3.94)	2.80 (4.26)	3.24 (4.68)	3.47 (4.90)	3.20 (4.77)
Days late (mean)	2.80 (4.80)	1.69 (3.52)	1.86 (3.31)	2.33 (4.07)	2.86 (4.69)	3.12 (4.59)	2.97 (4.50)
Cuts class (percent)	23.05	19.59	22.42	28.59	35.55	41.89	36.51
Doesn't do assigned homework (percent)	3.38	4.69	4.74	4.83	4.41	4.41	2.87
Has been in serious trouble with the law (percent)	6.08	5.03	5.41	5.08	5.59	5.70	5.52

NOTE: Variables are defined in appendix A. Table entries were calculated using student weights.

[1] Standard deviations are in parentheses.

Table 4.8.--Rates of selected types of misbehavior reported by seniors, by school enrollment: Spring 1980

Type of misbehavior	School enrollment						
	0-249	250-499	500-749	750-1,499	1,500-2,249	2,250-2,999	3,000+
Sample size	1,594	3,023	3,117	9,055	6,445	2,447	588
Days absent (mean)	3.54 (4.96) 1/	3.15 (4.22)	3.25 (4.45)	3.38 (4.43)	3.66 (4.70)	3.72 (4.62)	3.41 (4.18)
Days late (mean)	3.77 (5.89)	2.35 (4.22)	2.57 (4.45)	3.21 (5.01)	3.72 (5.48)	4.01 (5.50)	3.67 (5.21)
Cuts class (percent)	38.28	33.66	36.38	44.89	49.24	55.20	49.74
Doesn't do assigned homework (percent)	6.33	5.12	3.59	4.35	3.45	2.82	2.49
Has been in serious trouble with the law (percent)	4.42	4.37	3.65	4.28	3.64	3.79	2.99

NOTE: Variables are defined in appendix A. Table entries were calculated using students weights.

1/ Standard deviations are in parentheses.

The relationship between school size and class attendance for seniors is very similar to that for the sophomores. For each of the three measures of class attendance the rate initially drops with size, then increases through five categories and drops again in the very largest high schools. The relationship between the percentage of seniors who don't do assigned homework and class size does not duplicate the sophomore results. It is highest in the smallest schools and decreases as the size of the school increases. The incidence of not doing assigned homework among seniors in the very largest high schools is less than half of that for those in small high schools. The likelihood that seniors will say they have been in serious trouble with the law is related to the size of the school they attend. Seniors in the larger schools are less likely to report trouble of this sort. In this way the cohorts again differ.

4.3 The Effects of School and Student-Body Characteristics on Levels of Misbehavior: School-Level Analysis

The results presented above show that the level of misbehavior in a high school varies significantly by the type of school, school location, and school enrollment. Though these results are suggestive, we cannot be sure whether the reported relationships are real or spurious without further analysis. Tables 4.1 through 4.8 would not tell us whether large schools have worse attendance problems because they are located in cities rather than rural areas, or whether regional variations in rates of misbehavior are due to different mixes of Catholic, public, and other private schools, or to the possibility that schools may on the average be larger in some parts of the country than in others. Accordingly, we next present the results of an examination of the independent effects of these and other characteristics of high schools--that is, the effect of each characteristic when other aspects of the school and student body are controlled for.

These regressions were carried out on schools, not students: the school, in other words, served as the unit of analysis. Each school was characterized by reports of the school's administrator and aggregations of the self-reports of its sample sophomores or seniors. Because the number of sophomores and seniors participating in the study varied slightly between schools the aggregate measures do not have the same precision in each school. Therefore generalized least squares was used to obtain the estimates of the coefficients (cf. Judge et al., 1980).

A multiple regression analysis was performed for each of the five measures of misbehavior on a number of school characteristics. First of all, we included measures of school enrollment (and the square of school enrollment), type of community, type of school, and geographic region. The last three factors were measured by dummy variables corresponding to the categories in tables 4.1 through 4.6. In addition, three other characteristics of schools were included in the models.

The first of these characteristics was the log of the ratio of students to staff in the high school. A number of studies have suggested that the amount of attention that teachers give to students might be related to the level of misbehavior in the school. The connection is expected for two reasons. First, a student might respond to more attention by developing greater commitment to the high school. This commitment might motivate a student to obey school rules consistently. Second, teachers play a policing as well as supportive role in high schools. It seems reasonable that a person will often refrain from breaking rule if he or she expects to be caught. This reluctance may grow stronger if the person expects to be punished as well. High School and Beyond does not include self-report measures of behaviors that easily go undetected in schools. However, it is still reasonable to hypothesize that the "presence" of authority deters misbehavior, and that a staff that is large relative to the number of students can intensify the student's impression that he or she is under surveillance and thus inhibit the impulse to misbehave. The ratio of students to staff varies from less than five to over fifty in the High School and Beyond data. Since the relationship between misbehavior and this ratio might not be linear over such a range, the logarithm of the ratio of students to staff was used.

Another factor that might influence the quality of teacher-student interaction is the stability of the teaching staff. In order to measure this, we included in the model the percentage of teachers in the school who have been at that school for more than ten years.

Third, we wished to include a measure of at least one aspect of the academic environment in the high school. The average amount of homework assigned in the school would be a crude measure because the classroom teacher, not the school administration, decides how much homework to assign. Unfortunately, we do not have a measure of how much homework is assigned; we only know what sample students say they do. Using this self-report as it stands poses both conceptual and statistical problems. The amount of homework a student does can be explained by student motivation as well as by assignments made by teachers. These motivational factors can be consequences as much as causes of the behavior we have used to measure student misbehavior. To prevent the measure of assigned homework from being affected by the degree of misbehavior in the high school, we used the average amount of homework done only by sophomores whose grades were mostly B's or better. While this measure loses some stability because it is derived from less than the total sample of students in each school, it may better approximate the amount of homework actually assigned, and therefore be less contaminated.

It is apparent from the literature on delinquency that most of the variation in the behavior and academic performance of the student body can be explained by characteristics of students who are enrolled. Furthermore, student attributes that are associated with misbehavior are also associated with important aspects of high schools. Because of this latter set of associations, a regression of student misbehavior on school characteristics alone would almost certainly overstate the direct relationship between the characteristics of the school and the behavior of the student body. Characteristics that were associated with misbehavior at the student level such as the background characteristics in chapter 3 were measured at the school--or student body--level and included. Specifically, school-level analysis included the percentage of students who are minority students (Hispanic or black) (and the square of the percentage of minority students) and the percentage who are female (both measures from the school questionnaire). Measures of student body characteristics were from sophomore or senior reports as follows: average family income, average educational attainment of father, the percentage of fathers who work at professional or managerial jobs, the percentage who work at blue-collar jobs, and the percentage who are farmers or farm laborers. The percentage of students who had a father or male guardian living in the home at the time of the study, the percentage who had a mother or female guardian living in the home at the time of the study, the percentage of students who said that neither of their parents (or guardians) monitor their schoolwork, and the percentage of students who said that their parents often do not know where they are and what they are doing were also included. (The last seven percentage variables were rescaled by multiplying them by .01 for ease of presentation in the tables that follow.)

Including measures of student ability in equations predicting misbehavior raises the problem that measured abilities are arguably outcomes as well as determinants of high school behavior and of the high school experience generally. Suppose, for example, that two schools had entering classes of students with similar academic ability and similar behavioral tendencies, but the second school was better able both to control their behavior and to provide them with a good education. A comparison of the two groups of students when they were seniors that controlled for academic outcomes would not show as large a net difference in misbehavior as would be warranted by the facts.

The consequences of the reciprocal relationship between ability and misbehavior are more serious when analyzing senior than sophomore behavior, since seniors have been exposed to the influence of the high school longer. The accuracy of seniors' grades and test scores as a measure of ability at the start of high school is decreased by the fact that the test scores reflect what the seniors have learned during high school. The test scores should be a better measure of ability before high school for sophomores than for seniors. Two strategies are followed. First, so that seniors and sophomores can be compared, we present the results of regressions that do not include average test scores, average early educational expectations, or percentage of students enrolled in an academic program. Table 4.10 shows the coefficients and t-values obtained in regressions of the five measures of aggregate student behavior on the above list for the sophomore sample, and table 4.11 shows similar results for the senior sample. Second, models for sophomores that include the percentage of students enrolled in an academic program rescaled by (dividing by 10), the average scores of sophomores on the verbal and mathematics tests administered as part of the High School and Beyond study, and the average number of years out of the previous four that the sample sophomores in each school expected to go to college can be found in table 4.9.

Table 4.9.--Regression coefficients for school-level measures of the indicated types of misbehavior reported by sophomores, regressed on selected school and sophomore student body family background characteristics, and measures of the academic level of sophomores: Spring 1980 1/

Independent variables	Dependent variable2/									
	Average days absent		Average days late		Percent who cut class		Percent who don't do assigned homework		Percent who have been in serious trouble with the law	
	Coefficient	t-value	Coefficient	t-value	Coefficient	t-value	Coefficient	t-value	Coefficient	t-value
Intercept	11.31	8.3	5.51	3.8	6.74	4.2	2.3	3.5	1.57	2.7
Region:										
New England	-0.17	-0.7	-0.75	-3.1	-0.51	-1.9	-0.12	-1.1	-0.074	-0.8
Middle Atlantic	-0.25	-1.4	-1.12	-6.0	-0.35	-1.7	-0.013	-0.2	-0.014	-0.2
South Atlantic	-1.10	-6.6	-1.55	-8.8	-1.41	-7.2	-0.25	-3.2	-0.11	-1.6
East South Central	-1.24	-5.8	-1.49	-6.6	-1.48	-5.9	-0.31	-3.0	-0.069	-0.8
East North Central	-0.78	-4.8	-1.30	-7.6	-0.58	-3.0	-0.26	-3.2	0.045	0.6
West South Central	-0.93	-5.5	-1.70	-9.5	-0.82	-4.1	0.096	1.1	-0.017	-0.2
West North Central	-0.74	-4.1	-1.09	-5.7	-0.66	-3.1	-0.068	-0.8	0.047	0.6
Mountain	0.93	4.3	0.48	2.1	0.28	1.1	-0.10	-0.9	0.32	3.4
Type of Community:										
Suburban	0.24	2.3	0.35	3.2	0.023	0.2	0.047	0.9	0.037	0.8
Urban	0.38	2.5	0.53	3.4	0.021	0.1	0.098	1.4	-0.11	-1.7
Type of school:										
Private 3/	-0.14	-0.6	0.75	3.3	0.18	0.6	-0.14	-1.4	0.086	0.9
Catholic	-0.65	-3.7	-0.23	-1.2	-1.30	-6.4	-0.11	-1.3	-0.15	-2.0
School enrollment	-0.000084	-0.4	-0.00021	-0.9	0.0012	4.5	-0.00022	-2.0	-0.000071	-0.8
School enrollment**2	5.08 E-08	0.7	8.49 E-08	1.1	-2.2 E-07	-2.7	4.036 E-08	1.2	2.16 E-08	0.7
Student-staff ratio	0.096	0.8	-0.086	-0.6	-0.24	-1.7	0.20	3.5	-0.017	-0.4
Tenure of staff	-0.0057	-2.8	-0.0046	-2.1	-0.0017	-0.7	-0.00084	-0.9	-0.0021	-2.4
Percent minority	-0.026	-4.2	0.011	1.7	-0.0055	-0.8	-0.0068	-2.3	-0.0043	-1.7
Percent minority**2	0.000099	1.5	-0.00016	-2.2	3.38 E-07	0.0	5.95 E-06	0.2	0.0000086	0.3
Percent female	0.0029	0.8	0.00054	0.2	0.0020	0.5	0.0026	1.7	-0.0057	-4.1
Average homework	-0.10	-3.4	-0.067	-2.1	-0.013	-0.4	-0.051	-3.6	-0.033	-2.6
Average early educational expectations	0.19	1.4	0.12	0.8	0.44	2.7	0.025	0.4	-0.057	-0.9
Percent academic program	0.0067	0.2	-0.0013	-0.1	-0.016	-0.5	-0.011	-0.8	0.058	4.8
Average verbal score	-0.19	-2.1	-0.11	-1.1	-0.10	-0.9	0.029	0.6	-0.093	-2.3
Average math score	-0.34	-7.8	-0.14	-3.0	-0.29	-5.8	0.13	6.4	-0.071	-3.8
Average family income	0.000049	3.2	0.000053	3.4	0.000040	2.3	0.000021	2.9	0.0000094	1.5
Average father's education	-0.036	-0.4	0.18	2.1	-0.011	-0.1	-0.11	-2.7	0.071	2.0
Percent professional fathers	0.17	0.2	-1.80	-2.7	0.24	0.3	0.47	1.5	-0.16	-0.6
Percent blue collar fathers	0.43	0.9	-0.73	-1.5	-0.79	-1.5	0.0099	0.1	-0.037	-0.2
Percent farm fathers	0.94	1.8	-0.82	-1.5	-0.48	-0.8	-0.16	-0.6	0.053	0.2
Percent father present	-3.33	-6.1	-2.45	-4.2	-1.69	-2.7	-1.0	-3.8	-1.029	-4.4
Percent mother present	-2.44	-2.9	-1.61	-1.8	-0.36	-0.4	1.2	2.8	0.13	0.4
Percent parents do not know	2.71	5.7	4.35	8.6	3.36	6.0	0.77	3.4	1.26	6.1
Percent parents do not monitor	1.28	1.8	-0.034	-0.1	0.10	0.1	0.46	1.4	0.53	1.8
R^2	.53		.51		.40		.35		.27	
Dependent variable statistics:	2.89		2.52		25.31		4.79		5.78	
Mean (Standard deviation)	(1.68)		(2.14)		(17.31)		(6.69)		(6.04)	

NOTE: Variables are defined in appendix A. Table entries were calculated using school weights. The number of cases used in the calculations differs slightly from the total number of schools (1,015) due to item nonresponse. T-values have been corrected for item nonresponse as described in the technical note to chapter 1. Appendix A indicates which independent variables were rescaled for regression analysis.

1/ Coefficients were obtained using generalized least squares.

2/ For the percent variables, the regression was carried out on this quantity divided by ten. To compute expected percents, the results of a calculation should be multiplied by ten. T-values are unaffected by the rescaling.

3/ Because of the small school sample size, the heterogeneity of the schools, and the high nonresponse rate for schools in this sector, the estimates for other private schools are not nearly as accurate or as interpretable as those for public or Catholic schools.

Table 4.10.--Regression coefficients for school-level measures of the indicated types of misbehavior reported by sophomores, regressed on selected school and sophomore student body family background characteristics, and a measure of student body academic environment: Spring 1980 1/

Independent variables	Dependent variable 2/									
	Average days absent		Average days late		Percent who cut class		Percent who don't do assigned homework		Percent who have been in serious trouble with the law	
	Coefficient	t-value	Coefficient	t-value	Coefficient	t-value	Coefficient	t-value	Coefficient	t-value
Intercept	12.56	8.8	6.067	4.2	7.48	4.6	2.8	4.1	1.65	2.8
Region:										
New England	-0.29	-1.2	-0.82	-3.5	-0.64	-2.4	-0.14	-1.3	-0.029	-0.3
Middle Atlantic	-0.49	-2.7	-1.23	-6.7	-0.58	-2.8	-0.093	-1.1	-0.0091	-0.1
South Atlantic	-0.96	-5.5	-1.49	-8.6	-1.30	-6.5	-0.24	-3.0	-0.039	-0.5
East South Central	-1.05	-4.6	-1.41	-6.2	-1.29	-5.0	-0.26	-2.4	-0.043	-0.5
East North Central	-0.99	-5.8	-1.39	-8.2	-0.79	-4.1	-0.33	-4.1	0.011	0.2
West South Central	-0.72	-4.0	-1.61	-9.0	-0.63	-3.1	0.16	1.9	0.0032	0.1
West North Central	-1.12	-6.0	-1.25	-6.7	-0.98	-4.6	-0.19	-2.2	-0.071	-0.9
Mountain	0.78	3.4	0.41	1.8	0.13	0.5	-0.13	-1.2	0.25	2.7
Type of Community:										
Suburban	0.26	2.4	0.36	3.3	0.033	0.3	0.060	1.2	0.038	0.8
Urban	0.41	2.6	0.55	3.4	0.059	0.3	-0.098	-1.3	-0.093	-1.4
Type of school:										
Private 3/	-0.36	-1.6	0.65	2.8	-0.045	-0.2	-0.21	-2.0	0.060	0.6
Catholic	-0.77	-4.3	-0.27	-1.5	-1.36	-6.7	-0.17	-2.1	-0.13	-1.8
School enrollment	-0.00019	-0.8	-0.00025	-1.1	0.0011	4.2	-0.00028	-2.5	-0.00011	-1.1
School enrollment**2	9.77 E-08	1.3	1.04 E-07	1.4	-1.87 E-07	-2.2	6.11 E-08	1.7	2.73 E-08	0.9
Student-staff ratio	0.12	0.9	-0.084	-0.7	-0.27	-1.9	0.20	3.5	0.034	0.6
Tenure of staff	-0.0063	-2.9	-0.0048	-2.2	-0.0018	-0.7	-0.00092	-0.9	-0.0025	-2.8
Percent minority	-0.019	-2.9	0.014	2.2	-0.0003	-0.1	-0.0041	-1.4	-0.0021	-0.8
Percent minority**2	0.00010	1.5	-0.00016	-2.2	0.000018	0.2	5.39 E-07	0.0	0.0000073	0.2
Percent female	0.0048	1.4	0.0013	0.4	0.0047	1.2	-0.0015	-0.9	-0.0061	-4.2
Average homework	-0.16	-5.5	-0.093	-3.2	-0.055	-1.7	-0.076	-5.6	-0.035	-2.9
Average family income	0.000044	2.8	0.000051	3.4	0.000043	2.5	0.000019	2.6	0.0000091	1.4
Average father's education	-0.26	-3.1	0.088	1.1	-0.15	-1.7	-0.18	-4.7	0.022	0.6
Percent professional fathers	-0.25	-0.4	-1.99	-3.0	-0.1	-0.1	0.39	1.2	-0.31	-1.1
Percent blue collar fathers	0.43	0.9	-0.73	-1.5	-0.85	-1.6	0.047	0.2	-0.12	-0.6
Percent farm fathers	0.58	1.1	-0.96	-1.8	-0.87	-1.5	-0.27	-1.1	-0.14	-0.6
Percent father present	-3.69	-6.4	-2.61	-4.5	-2.056	-3.1	-1.2	-4.4	-1.037	-4.3
Percent mother present	-4.026	-4.5	-2.31	-2.6	-1.63	-1.6	0.72	1.8	-0.28	-0.8
Percent parents do not know	2.86	5.7	4.42	8.7	3.50	6.1	0.84	3.6	1.22	5.8
Percent parents do not monitor	1.25	1.7	-0.054	-0.1	0.02	0.0	0.51	1.5	0.41	1.4
R^2	.43		.50		.36		.31		.22	
Dependent variable statistics:	2.89		2.52		25.31		4.79		5.78	
Mean (standard deviation)	(1.68)		(2.14)		(17.31)		(6.69)		(6.04)	

NOTE: Variables are defined in appendix A. Table entries were calculated using school weights. The number of cases used in the calculations differs slightly from the total number of schools (1,015) due to item nonresponse. T-values have been corrected for item nonresponse as described in the technical note to chapter 1. Appendix A indicates which independent variables were rescaled for regression analysis.

1/ Coefficients were obtained using generalized least squares.

2/ For the percent variables, the regression was carried out on this quantity divided by ten. To compute expected percents, the results of a calculation should be multiplied by ten. T-values are unaffected by the rescaling.

3/ Because of the small school sample size, the heterogeneity of the schools, and the high nonresponse rate for schools in this sector, the estimates for other private schools are not nearly as accurate or as interpretable as those for public or Catholic schools.

Table 4.11.--Regression coefficients for school-level measures of the indicated types of misbehavior reported by seniors, regressed on selected school and senior student body family background characteristics, and a measure of student body academic environment: Spring 1980 1/

Independent variables	Dependent variable 2/									
	Average days absent		Average days late		Percent who cut class		Percent who don't do assigned homework		Percent who have been in serious trouble with the law	
	Coefficient	t-value	Coefficient	t-value	Coefficient	t-value	Coefficient	t-value	Coefficient	t-value
Intercept	7.32	5.8	3.71	2.2	3.73	2.2	1.4	2.6	0.0047	0.0
Region:										
New England	-1.03	-4.3	-1.18	-3.6	-1.76	-5.4	-0.05	-0.5	-0.020	-0.2
Middle Atlantic	-0.78	-4.1	-1.16	-4.4	-0.91	-3.5	-0.022	-0.3	-0.024	-0.4
South Atlantic	-1.49	-8.3	-1.44	-5.9	-1.17	-4.8	-0.084	-1.1	-0.18	-2.9
East South Central	-1.24	-5.4	-1.05	-3.3	-1.19	-3.8	-0.047	-0.5	-0.012	-0.2
East North Central	-0.87	-4.9	-1.54	-6.4	-1.15	-4.8	-0.0051	-0.1	0.0030	0.0
West South Central	-1.01	-5.5	-1.38	-5.5	-0.53	-2.1	0.13	1.7	0.06	0.9
West North Central	-1.07	-5.6	-1.56	-5.9	-0.93	-3.5	0.0033	0.0	0.025	0.4
Mountain	0.52	2.2	0.69	2.1	0.64	2.0	0.23	2.2	-0.089	-1.1
Type of community:										
Suburban	0.18	1.6	0.47	3.0	0.019	0.1	-0.072	-1.5	-0.024	-0.6
Urban	0.23	1.4	0.84	3.7	0.012	0.0	0.14	1.9	0.0039	0.1
Type of school:										
Private 3/	-0.93	-4.0	-0.045	-0.2	-0.41	-1.3	0.024	0.2	0.15	1.8
Catholic	-1.51	-8.1	-0.95	-3.8	-1.88	-7.4	-0.26	-3.2	-0.17	-2.6
School enrollment	0.00022	0.9	-0.00028	-0.8	0.00095	2.8	-0.00019	-1.8	0.000043	0.5
School enrollment**2	-6.72 E-08	-0.8	1.063 E-07	1.0	-1.53 E-07	-1.4	2.15 E-08	0.6	-2.90 E-08	-0.6
Student-staff ratio	-0.25	-2.0	-0.11	-0.6	-0.076	-0.5	0.037	0.7	0.047	1.1
Tenure of staff	-0.0051	-2.3	-0.0021	-0.7	-0.0013	-0.4	0.00045	0.5	0.0012	1.5
Percent minority	0.0035	0.5	0.020	2.2	-0.0055	-0.6	0.00018	0.1	0.0035	1.6
Percent minority**2	-0.000088	-1.3	-0.00013	-1.3	-0.000017	-0.2	-0.000018	-0.6	-0.000030	-1.2
Percent female	0.0062	1.7	0.0032	0.6	-0.0011	-0.2	-0.0015	-1.0	-0.0024	-1.9
Average homework	-0.019	-0.6	-0.093	-2.2	-0.019	-0.5	-0.032	-2.4	-0.031	-2.9
Average family income	0.000018	1.1	0.00010	4.8	0.000049	2.4	0.000011	1.6	0.0000094	1.7
Average father's education	-0.13	-1.4	0.0099	0.1	-0.0066	-0.0	-0.10	-2.7	0.031	1.0
Percent professional fathers	0.74	1.1	0.57	0.6	0.12	0.1	0.51	1.8	-0.31	-1.3
Percent blue collar fathers	0.43	0.9	-0.40	-0.6	-0.57	-0.9	0.020	0.1	-0.082	-0.5
Percent farm fathers	0.99	1.8	0.40	0.5	-1.47	-2.0	0.14	0.6	0.27	1.4
Percent father present	-1.86	-3.1	0.23	0.3	-1.39	-1.7	0.1	0.4	0.036	0.2
Percent mother present	-0.27	-0.3	-2.17	-2.1	1.36	1.3	0.15	0.5	-0.16	-0.6
Percent parents do not know	0.22	0.5	1.61	2.6	1.99	3.2	0.074	0.4	0.90	5.6
Percent parents do not monitor	0.63	1.0	-0.68	-0.8	-0.21	-0.3	0.59	2.2	-0.59	-2.7
R^2	.29		.33		.27		.13		.15	
Dependent variable statistics: Mean (standard deviation)	3.42 (1.48)		3.27 (2.37)		39.99 (19.03)		4.90 (5.77)		4.33 (5.18)	

NOTE: Variables are defined in appendix A. Table entries were calculated using school weights. The number of cases in the calculations differs slightly from the total number of schools (1,015) due to item nonresponse. T-values have been corrected for item nonresponse as described in the technical note to chapter 1. Appendix A indicates which independent variables were rescaled for regression analysis.

1/ Coefficients were obtained using generalized least squares.

2/ For the percent variables, the regression was carried out on this quantity divided by ten. To compute expected percents, the results of a calculation should be multiplied by ten. T-values are unaffected by the rescaling.

3/ Because of the small school sample size, the heterogeneity of the schools, and the high nonresponse rate for schools in this sector, the estimates for other private schools are not nearly as accurate or as interrretable as those for public or Catholic schools.

As an aid to interpreting these coefficients, tables 4.12 through 4.19 present a comparison between unadjusted school-level measures of self-reported sophomore and senior misbehavior and predicted differences in adjusted "school scores" by the type of community, the type of school, the geographic region, and the size of the school enrollment. The adjusted school scores and predicted differences were derived from the models in tables 4.9 through 4.11, and then classified by type of community, type of school, geographic region, and school enrollment. In each of tables 4.12 through 4.19, the first figure in the top row for each misbehavior--the one in parentheses--gives the mean of the student-body misbehavior measure for the schools in that category. This quantity is the mean of the school scores, that is, the mean of the average behavior of students in each school in the category. These unadjusted scores are not the same as the mean levels of student behavior presented in tables 4.1 through 4.8. To explain the difference in terms of the example of the Type A school, the unadjusted mean absenteeism in these tables would be the average of the average absenteeism for the two Type A schools, namely 4 days.

The other numbers in the top row of each group are deviations from the average in parentheses. Thus, to take an example from table 4.12, the mean of "Average days late" for urban schools is 3.28. For suburban schools the average is .30 lower (i.e, 2.98). Rural schools have an average that is .57 lower than urban schools (i.e., 2.61). Deviations are always based on the quantity which appears in parentheses in the table.

The school-level rates do not have the same values as the individual-level rates, as a comparison of the unadjusted columns of tables 4.12 through 4.19 with the quantities in tables 4.1 through 4.8 will show. Generally speaking, however, the order of the quantities across rows is similar. The discrepancies are greater in the cases where the events are relatively rare, which is true for refusing to do assigned homework or having been in serious trouble with the law. The evident bunching of these rare behaviors in certain schools combines with the low proportion of sample students who commit these activities to produce school-level results that differ substantially from rates produced at the student level. The low rates of commission of these behaviors cause the school estimates to be less reliable, which means that they should be interpreted cautiously. This caution may be more salient for the comparisons that involve many categories of schools, such as the comparisons by geographic region.

4.3.1 Comparisons by Type of Community

Comparing rates of absenteeism and tardiness with the sample high schools classified by type of community, we find that the direction of the differences among urban, suburban, and rural schools remains the same after controls are applied. The differences by community type are reduced, however. The reduction in the difference in rates of class-cutting is dramatic. The results suggest that urban sophomores have somewhat lower rates of being in trouble with the law than is suggested by the unadjusted scores. The addition of average test scores, average early educational expectations, and the level of student participation in an academic curriculum makes some difference in the estimated size of the coefficients for urban and suburban schools. The changes are relatively small, however, which provides a firmer basis for believing that the senior estimates are reasonably good. The unadjusted differences among urban, suburban, and rural senior scores are smaller than those based on sophomore behavior. This finding parallels the results in tables 4.1 and 4.2. When controls are applied, the differences in rates of absenteeism are trivial. Significant differences in rates of tardiness persist, but their magnitude is also reduced. Other differences are

Table 4.12.—Comparison of unadjusted and adjusted school-level measures of selected types of misbehavior reported by sophomores, by type of community: Spring 1980

Type of misbehavior		Type of community		
		Urban	Suburban	Rural
Sample size		239	467	267
Average days absent	unadjusted[1/]	(3.28)	-.30	-.57
	adjusted[2/]	—	-.15	-.41
	adjusted+[3/]	—	-.14	-.38
Average days late	unadjusted	(3.82)	-.99	-1.94
	adjusted	—	-.19	-.55
	adjusted+	—	-.18	-.53
Percent who cut class ..	unadjusted	(32.15)	-3.60	-11.29
	adjusted	—	-.26	-.59
	adjusted+	—	+.02	-.21
Percent who don't do assigned homework	unadjusted	(2.76)	+2.37	+2.44
	adjusted	—	+1.58	+.10
	adjusted+	—	+1.45	-.10
Percent who have been serious trouble with the law	unadjusted	(6.36)	-.15	-1.05
	adjusted	—	+1.31	+.93
	adjusted+	—	+1.48	+1.10

NOTE: Variables are defined in appendix A. Table entries were calculated using school weights.

[1/] Numbers in parentheses are the unadjusted weighted means for urban high schools. Signed numbers show the differences between the unadjusted mean for urban schools and that for schools in each of the other categories.

[2/] Signed numbers in the "adjusted" rows give the expected difference between scores for schools in the right columns and schools in the left column, based on the models described in table 4.10. In other words, they show the predicted difference in levels of behavior for schools classified by the column variable, when all other variables in the model are held constant. The differences are expressed in days for the first two row variables, and in percentage points for the last three row variables.

[3/] Signed numbers in the "adjusted+" rows give the expected difference between scores for schools in the right columns and schools in the left column. The scores and adjustment for school and student body characteristics are based upon models described in table 4.9.

Table 4.13.--Comparison of unadjusted and adjusted school-level measures of selected types of misbehavior reported by seniors, by type of community: Spring 1980

Type of misbehavior		Type of community		
		Urban	Suburban	Rural
Sample size		236	462	267
Average days absent ...	unadjusted[1]	(3.61)	-.16	-.26
	adjusted[2]	--	-.05	-.23
Average days late	unadjusted	(4.78)	-1.23	-2.19
	adjusted	--	-.37	-.84
Percent who cut class ..	unadjusted	(43.08)	+.52	-6.62
	adjusted	--	+.07	-.12
Percent who don't do assigned homework	unadjusted	(5.18)	-1.58	+.57
	adjusted	--	-2.09	-1.37
Percent who have been in serious trouble with the law	unadjusted	(3.84)	+.62	+.56
	adjusted	--	-.28	-.04

NOTE: Variables are defined in appendix A. Table entries were calculated using school weights.

[1] Numbers in parentheses are the unadjusted weighted means for urban high schools. Signed numbers show the differences between the unadjusted mean for urban schools and that for schools in each of the other categories.

[2] Signed numbers in the "adjusted" rows give the expected difference between scores for schools in the right columns and schools in the left column, based on the models described in table 4.10. In other words, they show the predicted difference in levels of behavior for schools classified by the column variable, when all other variables in the model are held constant. The differences are expressed in days for the first two row variables, and in percentage points for the last three row variables.

unimportant. The results of tables 4.12 and 4.13 imply that most of the differences in attendance problems between urban, suburban and rural schools can be accounted for by the other aspects of the school and the student body that are included in the model.

4.3.2 Comparisons by Type of School

It was shown above that Catholic schools have much lower levels of misbehavior than public schools. These large differences persist when school-level measures are used. The results in tables 4.14 and 4.15 show that while more than 50 percent of the difference in sophomore absenteeism rates between Catholic and private schools can be explained by the addition of other factors in the model, very little of the difference in class-cutting can be so explained. In both cases, the difference between other private and public schools was not large to begin with and is not significant after the addition of controls. The adjusted difference in tardiness is substantial, however, though less than half the size of the unadjusted difference. Adjusted rates of not doing homework and being in trouble with the law are somewhat lower for Catholic than public schools, but the magnitude of the difference is not large. The public school-other private school differences for these two measures are not large either. Adjusting for other factors actually increases the gap in attendance between Catholic and public schools. While the advantage that other private schools have over public schools in attendance levels is increased when controls are applied, the reverse occurs for the other two senior attendance measures, and the adjusted differences are small. In sum, the regressions show that the advantage Catholic schools have over public schools in rates of misbehavior obviously cannot be explained away by the other characteristics of schools and student bodies that we have included in the analysis. The public-other private school differences are

Table 4.14.--**Comparison of unadjusted and adjusted school-level measures of selected types of misbehavior reported by sophomores, by type of school: Spring 1980**

Type of misbehavior		Type of school		
		Public	Catholic	Other private 1/
Sample size		879	84	38
Average days absent	unadjusted 2/	(3.01)	-1.38	-.072
	adjusted 3/	—	-.77	-.360
	adjusted+ 4/	—	-.65	-.140
Average days late	unadjusted	(2.20)	-.28	+2.280
	adjusted	—	-.27	+.650
	adjusted+	—	-.23	+.750
Percent who cut class ..	unadjusted	(25.83)	-13.73	+3.640
	adjusted	—	-13.60	-.450
	adjusted+	—	-13.02	+1.750
Percent who don't do assigned homework	unadjusted	(5.69)	-3.78	-4.050
	adjusted	—	-1.70	-2.100
	adjusted+	—	-1.10	-1.400
Percent who have been serious trouble with the law	unadjusted	(5.78)	-2.97	+1.550
	adjusted	—	-1.32	+.600
	adjusted+	—	-1.52	+.860

NOTE: Variables are defined in appendix A. Table entries were calculated using school weights.

1/ Because of the small school sample size, the heterogeneity of the schools, and the high nonresponse rate for schools in this sector, estimates for other private schools are not nearly as accurate or as interpretable as those for public or Catholic schools.

2/ Numbers in parentheses are the unadjusted weighted means for public high schools. Signed numbers show the differences between the unadjusted mean for public schools and that for schools in each of the other categories.

3/ Signed numbers in the "adjusted" rows give the expected difference between scores for schools in the right columns and schools in the left column, based on the models described in table 4.10. In other words, they show the predicted difference in levels of behavior for schools classified by the column variable, when all other variables in the model are held constant. The differences are expressed in days for the first two row variables, and in percentage points for the last three row variables.

4/ Signed numbers in the "adjusted+" rows give the expected difference between scores for schools in the right columns and schools in the left column. The scores and adjustment for school and student body characteristics are based upon models described in table 4.9.

Table 4.15.--Comparison of unadjusted and adjusted school-level measures of selected types of misbehavior reported by seniors, by type of school: Spring 1980

Type of misbehavior		Type of school		
		Public	Catholic	Other private 1/
Sample size		873	84	35
Average days absent	unadjusted 2/	(3.57)	-1.43	-.30
	adjusted 3/	—	-1.51	-.93
Average days late	unadjusted	(3.03)	-.42	+1.98
	adjusted	—	-.95	-.04
Percent who cut class ..	unadjusted	(41.01)	-15.10	-12.89
	adjusted	—	-18.80	-4.10
Percent who don't do assigned homework	unadjusted	(5.20)	-3.36	-.24
	adjusted	—	-2.60	+.24
Percent who have been in serious trouble with the law	unadjusted	(4.39)	-2.36	+.93
	adjusted	--	-1.70	+1.50

NOTE: Variables are defined in appendix A. Table entries were calculated using school weights.

1/ Because of the small school sample size, the heterogeneity of the schools, and the high nonresponse rate for schools in this sector, estimates for other private schools are not nearly as accurate or as interpretable as those for public or Catholic schools.

2/ Numbers in parentheses are the unadjusted weighted means for public high schools. Signed numbers show the differences between the unadjusted mean for public schools and that for schools in each of the other categories.

3/ Signed numbers in the "adjusted" rows give the expected difference between scores for schools in the right columns and schools in the left column, based on the models described in table 4.10. In other words, they show the predicted difference in levels of behavior for schools classified by the column variable, when all other variables in the model are held constant. The differences are expressed in days for the first two row variables, and in percentage points for the last three row variables.

smaller after adjustment. These results do not guarantee that identical students would conform to rules more in Catholic schools than in public schools, since the measures we used as controls are not perfect, but their failure to eliminate the differences in rates certainly suggests that the structure of the three types of schools influences levels of misbehavior.

4.3.3 Comparisons by Region

Regional differences for sophomores and seniors are shown in tables 4.16 and 4.17. While a fraction of the difference in rates of absenteeism and tardiness between high schools in the western part of the country and those located elsewhere disappears when controls are applied, the remainder is substantial. These differences exist for both the sophomore and senior measures. Moreover, the adjusted differences in rates of class-cutting between the western and other schools are larger than the unadjusted differences. The southern high schools have the lowest rates of sophomore attendance problems when other factors are controlled for. The unadjusted rates for this region of the country are relatively low, but the controls cause the differences between their rates and those of other areas to be more substantial and more systematic. No region of the country has consistently the lowest rates of senior attendance problems. The adjusted differences among the schools in the seven eastern regions are small for both absenteeism and tardiness. For some reason, the New England schools have substantially lower adjusted rates of senior class-cutting, and the adjustment does not change the position of New England schools relative to the others. To summarize, the analysis shows that the adjustment does not remove the geographic differences in the average level of attendance problems in high schools. In some cases the adjustments cause shifts in the relative ordering but the position of the far western schools as having the lowest attendance rates does not change.

Table 4.16.--Comparison of unadjusted and adjusted school-level measures of selected types of misbehavior reported by sophomores, by school region: Spring 1980

Type of misbehavior		Region								
		New England	Middle Atlantic	South Atlantic	East South Central	West South Central	East North Central	West North Central	Mountain	Pacific
Sample size		52	158	147	50	102	193	77	53	142
Average days absent	unadjusted[1/]	(2.64)	+.05	-.23	+.21	+.50	-.15	-.43	+2.32	+1.12
	adjusted[2/]	--	-.20	-.67	-.76	-.43	-.70	-.83	+1.07	+.29
	adjusted+[3/]	--	-.08	-.99	-1.07	-.76	-.61	-.57	+1.10	+.17
Average days late	unadjusted	(2.45)	-.31	-.20	-.41	-.37	-.62	-.70	+1.60	+2.52
	adjusted	--	-.41	-.67	-.59	-.79	-.57	-.43	+1.23	+.82
	adjusted+	--	-.37	-.80	-.74	-.95	-.55	-.34	+1.23	+.75
Percent who cut class ..	unadjusted	(26.62)	+1.24	-5.65	-7.18	-1.08	-2.40	-10.28	+6.68	+10.88
	adjusted	--	+.63	-6.64	-6.50	+.136	-1.55	-3.35	+7.72	+6.36
	adjusted+	--	+1.56	-9.02	-9.75	-3.19	-.76	-1.53	+7.86	+5.05
Percent who don't do assigned homework	unadjusted	(3.35)	+.88	-.22	+1.92	+5.84	-.22	+1.02	+.42	+1.52
	adjusted	--	+.49	-.96	-1.16	+3.02	-1.87	-.50	+.10	+1.42
	adjusted+	--	+1.04	-1.38	-1.94	+2.13	-1.40	+1.85	+.18	+1.17
Percent who have been serious trouble with the law	unadjusted	(4.32)	+.16	+1.18	+1.79	+2.49	+.69	-.12	+4.93	+3.32
	adjusted	--	+.20	-.11	-.17	+.32	+.40	-.42	+2.84	+.29
	adjusted+	--	+.60	-.41	+.05	+.57	+1.19	+1.21	+3.92	+.74

NOTE: Variables are defined in appendix A. Table entries were calculated using school weights.

1/ Numbers in parentheses are the unadjusted means for New England schools. Signed numbers show the differences between the unadjusted means for New England and that for schools in each of the other categories.

2/ Signed numbers in the "adjusted" rows give the expected difference between scores for schools in the right columns and schools in the left column, based on the models described in table 4.10. In other words, they show the predicted difference in levels of behavior for schools classified by the column variable, when all other variables in the model are held constant. The differences are expressed in days for the first two row variables, and in percentage points for the last three row variables.

3/ Signed numbers in the "adjusted+" rows give the expected difference between scores for schools in the right columns and schools in the left column. The scores and adjustment for school and student body characteristics are based on models described in table 4.9.

Table 4.17.--Comparison of unadjusted and adjusted school-level measures of selected types of misbehavior reported by seniors, by school region: Spring 1980

Type of misbehavior		Region								
		New England	Middle Atlantic	South Atlantic	East South Central	West South Central	East North Central	West North Central	Mountain	Pacific
Sample size		52	153	145	51	100	191	76	53	144
Average days absent	unadjusted[1]	(2.88)	+.41	-.17	+,21	+.62	+.44	+.16	+2.07	+1.57
	adjusted[2]	--	+.25	-.46	-.21	+.02	+.16	-.04	+1.55	+1.03
Average days late	unadjusted	(2.98)	-.07	-.12	0.00	+.15	-.44	-.56	+2.39	+2.43
	adjusted	--	+.02	-.26	+.13	-.20	-.36	-.38	+1.87	+1.18
Percent who cut class ...	unadjusted	(33.57)	+7.08	+4.02	+1.55	+6.66	+4.75	+.54	+18.91	+16.11
	adjusted	--	+8.55	+5.96	+5.78	+12.35	+6.11	+8.38	+24.07	+17.65
Percent who have been serious trouble with the law	unadjusted	(3.03)	+.91	+.71	+2.13	+2.92	+1.56	+3.67	+3.31	+.85
	adjusted	--	+.28	-.34	+.02	+1.86	+.45	+.53	+2.77	+.50
Percent who have been serious trouble with the law	unadjusted	(3.69)	-.49	-1.10	+.75	+1.65	+.31	+1.56	+.09	+2.16
	adjusted	--	-.05	-1.63	+.08	+.80	+.23	+.45	-.69	+.20

NOTE: Variables are defined in appendix A. Table entries were calculated using school weights.

[1] 1/ Numbers in parentheses are the unadjusted means for New England schools. Signed numbers show the differences between the unadjusted mean for New England and that for schools in each of the other categories.

[2] 2/ Signed numbers in the "adjusted" rows give the expected difference between scores for schools in the right columns and schools in the left column, based on the models described in table 4.10. In other words, they show the predicted difference in levels of behavior for schools classified by the column variable, when all other variables in the model are held constant. The differences are expressed in days for the first two row variables, and in percentage points for the last three row variables.

4.3.4 Comparisons by School Enrollment

As we saw in tables 4.7 and 4.8, the rates of attendance problems measured at the student level have a curvilinear relationship with school enrollment. The rates first drop with size and then increase. Rates of not doing assigned homework and of being in trouble with the law have little relationship with school size. The regression models presented in tables 4.18 and 4.19 show that school size actually has little effect on absenteeism or on tardiness. Large schools, however, experience difficulty in controlling the attendance of their students at class during the school day. The effect of size on both sophomore and senior class-cutting is substantial.

4.3.5 Comparisons by Student-Staff Ratio, Staff Tenure, Level of Assigned Homework, and the Ethnic Composition of the School

As noted above, we included four additional characteristics of high schools in the regression. We consider these effects, presented in tables 4.9 and 4.10, next.

The results of the regression analysis show that the log of the student-staff ratio is not an especially strong predictor of self-reported misbehavior. Its effect is moderately strong only on the percentage of sophomores in the high school who refuse to do assigned homework. _Ceteris paribus_, a school with a 20:1 staff to student ratio has a predicted average of 1.4 percentage points fewer students who refuse to do assigned homework than a school with a 40:1 ratio.

The second characteristic is the percentage of teachers who have been working at the school for more than ten years. Schools with a more stable faculty have lower scores on all five measures of sophomore misbehavior. In three cases, the t-value is larger than 2. The effect is a reasonably strong predictor of the level of absenteeism and tardiness in a school, and also of

Table 4.18.--Comparison of unadjusted and adjusted school-level measures of selected types of misbehavior reported by sophomores, by school enrollment: Spring 1980

Type of misbehavior		School enrollment						
		0-249	250-499	500-749	750-1,499	1,500-2,249	2,250-2,999	3,000+
Sample size		74	95	98	300	224	95	29
Average days absent	unadjusted1/	(3.17)	-.65	-.66	-.40	-.02	+.22	-.01
	adjusted2/	--	-.03	-.06	-.07	-.004	+.16	+.58
	adjusted+3/	--	-.01	-.02	-.02	+.02	+.12	+.35
Average days late	unadjusted	(3.24)	-1.52	-1.40	-.97	-.38	-.11	-.25
	adjusted	--	-.05	-.09	-.12	-.08	+.06	+.45
	adjusted+	--	-.06	-.14	-.30	-.63	-1.05	-1.79
Percent who cut class ..	unadjusted	(24.30)	-4.21	-2.76	+3.43	+11.21	+17.57	+11.65
	adjusted	--	+2.42	+4.83	+8.42	+12.52	+14.62	+14.23
	adjusted+	--	+2.62	+5.21	+9.00	+13.14	+14.92	+13.51
Percent who don't do assigned homework	unadjusted	(4.61)	+.54	0.00	+.18	-.17	-.32	-1.76
	adjusted	--	-.60	-1.18	-1.99	-2.75	-2.85	-1.92
	adjusted+	--	-.48	-.96	-1.65	-2.41	-2.73	-2.47
Percent who have been serious trouble with the law	unadjusted	(6.72)	-1.58	-1.29	-1.60	-1.22	-1.08	-1.76
	adjusted	--	-.23	-.45	-.74	-.97	-.91	-.35
	adjusted+	--	-.15	-.28	-.44	-.50	-.33	+.27

NOTE: Variables are defined in appendix A. Table entries were calculated using school weights.

1/ Numbers in parentheses are the unadjusted means for high schools with fewer than 250 students. Signed numbers show the differences between the unadjusted mean for schools with fewer than 250 students and that for schools in each of the other categories.

2/ Signed numbers in the "adjusted" rows give the expected difference between scores for schools in the right columns and schools in the left column, based on the models described in table 4.10. In other words, they show the predicted difference in levels of behavior for schools classified by the column variable, when all other variables in the model are held constant. The differences are expressed in days for the first two row variables, and in percentage points for the last three row variables.

3/ Signed numbers in the "adjusted+" rows give the expected difference between scores for schools in the right columns and schools in the left column. The scores and adjustment for school and student body characteristics are based upon models described in table 4.9.

Table 4.19.--Comparison of unadjusted and adjusted school-level measures of selected types of misbehavior reported by seniors, by school enrollment: Spring 1980

Type of misbehavior		School enrollment						
		0-249	250-499	500-749	750-1,499	1,500-2,249	2,250-2,999	3,000+
Sample size		71	95	100	298	224	91	28
Average days absent	unadjusted[1]	(3.60)	-.38	-.38	-.26	-.06	+.11	-.23
	adjusted[2]	--	+.05	+.09	+.13	+.15	+.10	-.09
Average days late	unadjusted	(4.02)	-1.73	-1.50	-.85	-.31	-.02	-.42
	adjusted	--	-.05	-.10	-.15	-.13	+.005	+.31
Percent who cut class	unadjusted	(38.63)	-5.13	-3.29	+4.92	+10.36	+16.37	+11.22
	adjusted	--	+2.10	+4.21	+7.37	+11.09	+13.17	+13.36
Percent who don't do assigned homework	unadjusted	(5.79)	-.58	-1.98	-1.34	-2.33	-2.96	-3.42
	adjusted	—	-.43	-.87	-1.58	-2.51	-3.22	-3.82
Percent who have been serious trouble with the law	unadjusted	(4.93)	-.80	-1.21	-.65	-1.34	-1.11	-2.34
	adjusted	--	+.07	+.11	+.08	-.22	-.82	-2.18

NOTE: Variables are defined in appendix A. Table entries were calculated using school weights.

[1] Numbers in parentheses are the unadjusted means for high schools with fewer than 250 students. Signed numbers show the differences between the unadjusted mean for schools with fewer than 250 students and that for schools in each of the other categories.

[2] Signed numbers in the "adjusted" rows give the expected difference between scores for schools in the right columns and schools in the left column, based on the models described in table 4.10. In other words, they show the predicted difference in levels of behavior for schools classified by the column variable, when all other variables in the model are held constant. The differences are expressed in days for the first two row variables, and in percentage points for the last three row variables.

the percentage of sample sophomores in the school who say they have been in trouble with the law. The fact that the average tenure level is related to the latter activity is, we believe, grounds for caution concerning the true direction of the relationship. While a stable faculty can be a source of strength for a school, a low level of stability could be a response to the level of strain that the student body puts on the faculty, as many reports on "teacher burnout" suggest (see, for example, Gottfredson and Daiger, 1977, pp. 56 ff.). Unless one is prepared to believe that a stable faculty can reduce the percentage of sophomores in that school who would otherwise become delinquent, the findings suggest that the average tenure level of a school is more accurately described as an indicator than as a cause of its level of misbehavior. Senior rates of misbehavior, which are less responsive to the student-staff ratio, are also less strongly affected by the tenure of the faculty. Only the level of absenteeism shows the expected negative relationship.

Tables 4.9 and 4.10 show that the amount of homework done by the better students in the school has a negative effect on all five misbehavior measures for sophomores. The effect is particularly strong on the levels of absenteeism in the school and, not surprisingly, on the percentage of sophomores who refused to do assigned homework. Despite efforts to eliminate the contamination of selection effects on the measure of homework assigned in the school (Average homework) by restricting the subsample from which it was constructed, the measure may be conveying more about the type of students who go to a particular school than about the effects of school policy. The inclusion of average test scores, average early educational expectations, and percentage in an academic curriculum does, in fact, reduce the effect of "Average homework," but these variables do not eliminate its effect. Even after these measures of sophomore ability and academic potential are controlled for, schools whose students do more homework, and which presumably assign more homework, have lower levels of sophomore misbehavior. The effect of the amount of homework done by sophomores on senior misbehavior is not as pronounced, but is still in the expected direction.

A final relationship we wish to explore at the present time involves the racial and ethnic composition of the school. The results of chapter 3 showed that ethnicity was related to misbehavior, though not strongly. Furthermore, the direction of the difference depended upon whether one looked at the unadjusted or adjusted differences. In the comparison of unadjusted estimates, white students had lower rates of misbehavior than students of other races, but, when other characteristics of the individual were controlled for, rates of misbehavior among whites were higher. At the school level, we wished to determine whether there were significant effects of the racial composition of the school on misbehavior. The models thus contain both the "Percent minority" in the school and the "Percent minority squared." The results show that the measures were in some cases significantly related to levels of misbehavior, but the pattern is not consistent. For both sophomores and seniors, the level of tardiness is highest in schools with roughly equal proportions of white students and students of other races. In schools where the proportions of white or minority students are unequal, the level of tardiness is lower. Sophomore absenteeism decreases as the size of the minority population in the school increases. Absenteeism among sophomores does not reach a minimum until the 90 percent minority level. But senior rates of absenteeism do not vary in a similar way. The proportion of minority students does not significantly affect the other forms of misbehavior.

4.4 Sophomores' and Administrators' Perceptions of High School Problems

Having analyzed the relationship between student self-reports and some important characteristics of high schools, we next turn to an examination of the reports of school administrators about the level of problems in their schools and to sophomores' reports about how frequently different forms of misbehavior occur in their schools.[1] These measures are difficult to use for comparative purposes because there is no way of knowing the standard each observer used in reaching his or her judgment. A sophomore in a school where 2 percent of his or her classmates cut class on any given day may feel that "sometimes" is a good way to describe such a frequency. Another sophomore may prefer "not often" under these circumstances. Disagreements would not be a problem if they were distributed more or less randomly throughout the population. The averages of the judgments of sample sophomores in each school would then produce relatively stable measures of the frequency of each form of activity they were asked to comment on.

However, we cannot assume that judgments are independent of the dimensions used to characterize schools. The school enrollment, the region and type of community in which it is located, and the level of misbehavior itself, all might influence the meaning a sophomore would give to the words "often," "sometimes" and "never." School enrollment might be a factor because the absolute number of events in a school would normally increase with school size, and students might use both absolute and relative frequencies to reach their conclusions. School location might affect the meaning of the words and might be related to the expectations students have concerning misbehavior and, consequently, to their interpretations of observed levels of misbehavior. The level of misbehavior might also affect expectations and the operating definitions sophomores would use for each of these terms.

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[1] Seniors were not asked the questions about perceptions of the school analyzed in this section.

Similar problems exist in interpreting the judgments of the school administrators. The definition of the terms "serious," "moderate," minor," and "not at all" would hardly be uniform across all individuals and all school contexts. Furthermore, the "random" fluctuations in the interpretation of the terms would be more serious than in the case of student perceptions, since there is only one set of evaluations for each school.

The difficulties in translating the opinions of sophomores and school administrators into objective measures of misbehavior are certainly grounds for caution in interpreting the results that follow. These difficulties do not entirely vitiate the measures, however. They are almost certainly related to levels of misbehavior in schools, so that large differences between schools should be taken seriously. In addition, one could argue that these measures provide more than a simple description of the level of misbehavior in a school. They also provide information about the response of students and administrators to that misbehavior. If most students in a school feel that a certain type of misbehavior occurs often, it is reasonable to conclude that, whatever its absolute frequency, this activity is impinging on the consciousness of the students and has unknown but real effects on morale, on attitudes toward education, and on attitudes toward authority. These measures do provide important information on the social environment of the school.

4.4.1 Sophomores' Perceptions

Sophomores' evaluations of school problems, for schools classified according to type of community, type of school, geographic region, and school enrollment, are examined first. For each sample high school, the percentage of sophomores in that school who said that a type of misbehavior occurred "often" was computed. These school scores were then averaged within each category in a classification of schools to provide the quantities in tables 4.20 through 4.23.

While sophomores' self-reports presented in table 4.12 indicated that urban schools have greater attendance problems than do suburban or rural schools, table 4.20 shows that urban schools on the average have a lower percentage of sophomores who think that absenteeism and class-cutting occur often. Urban sophomores are sparing in their use of the descriptor "often" for all six forms of misbehavior. Rural sophomores are more likely to perceive that their schools have high levels of disobedience, talking back to teachers, and fighting than are sophomores in urban and suburban schools.

In contrast, the perception of misbehavior in public and Catholic schools shown in table 4.21 produces the same conclusion as do the self-reports in table 4.14: public schools appear to have higher rates of misbehavior. However, the perceptions of students apparently exaggerate the difference between public and private schools in the levels of misbehavior. Rates of absenteeism and class-cutting from the self-reports are much more similar among different types of schools than the evaluations of sophomores suggest.

The evaluations of sophomores in schools classified by geographic region presented in table 4.22 also are apparently inconsistent with student self-reports (table 4.16). While schools in the western part of the country had higher levels of absenteeism and class-cutting than schools in other regions, their sophomores are not more likely to say that these events occur "often." Schools in the East South Central region of the country, whose students reported low rates of absenteeism and class-cutting, have sophomores

Table 4.20.--Means and standard deviations of school-level measures of sophomores' perceptions of selected school problems, by type of community: Spring 1980

Sophomores' perception of school problems	Type of community		
	Urban	Suburban	Rural
Sample size	239	467	267
Percent who think students often don't attend school..	28.09 (25.52) 1/	35.15 (21.89)	30.66 (18.00)
Percent who think students often cut classes	37.56 (31.56)	44.85 (28.72)	35.93 (24.62)
Percent who think students often talk back	20.60 (14.77)	24.35 (14.56)	26.41 (13.99)
Percent who think students often disobey instructions	29.81 (17.13)	36.73 (20.66)	41.86 (16.31)
Percent who think students often get into fights......	14.13 (16.26)	20.12 (14.82)	20.40 (14.87)
Percent who think students often threaten teachers ...	3.41 (6.29)	3.16 (4.38)	3.11 (4.99)

NOTE: Variables are defined in appendix A. Table entries were calculated using school weights.

1/ Standard deviations are in parentheses.

Table 4.21.--Means and standard deviations of school-level measures of sophomores' perceptions of selected school problems, by type of school: Spring 1980

Sophomores' perception of school problems	Type of school		
	Public	Catholic	Other private 1/
Sample size	854	83	37
Percent who think students often don't attend school..	38.47 (18.07) 2/	7.40 (6.62)	10.02 (13.98)
Percent who think students often cut classes	46.78 (26.22)	13.55 (12.51)	13.88 (13.25)
Percent who think students often talk back	28.44 (13.26)	13.35 (9.08)	11.72 (11.73)
Percent who think students often disobey instructions.	43.07 (16.00)	24.29 (16.56)	20.06 (16.83)
Percent who think students often get into fights	23.50 (14.57)	8.36 (6.12)	3.30 (5.28)
Percent who think students often threaten teachers ...	3.79 (5.32)	0.79 (1.71)	1.24 (3.45)

NOTE: Variables are defined in appendix A. Table entries were calculated using school weights.

1/ Because of the small school sample size, the heterogeneity of the schools, and the high nonresponse rate for schools in this sector, the estimates for other private schools are not nearly as accurate or as interpretable as those for public or Catholic schools.

2/ Standard deviations are in parentheses.

Table 4.22.--Means and standard deviations of school-level measures of sophomores' perceptions of selected school problems, by region: Spring 1980

Sophomores' perception of school problems	Region								
	New England	Middle Atlantic	South Atlantic	East South Central	West South Central	East North Central	West North Central	Mountain	Pacific
Sample size	52	158	147	50	102	193	77	53	142
Percent who think students often don't attend school	34.71 (24.20)[1]	32.22 (21.25)	29.16 (21.98)	39.93 (12.35)	34.92 (20.02)	36.30 (19.61)	23.17 (18.39)	32.86 (18.83)	29.95 (22.94)
Percent who think students often cut classes	45.11 (31.24)	48.68 (27.14)	38.62 (27.32)	42.49 (17.80)	35.48 (23.63)	46.43 (25.48)	27.91 (27.01)	38.07 (28.28)	37.59 (31.38)
Percent who think students often talk back	25.29 (16.28)	28.95 (16.78)	23.15 (13.62)	33.35 (12.71)	29.61 (11.93)	26.90 (12.27)	20.03 (12.70)	17.66 (10.76)	18.90 (15.80)
Percent who think students often disobey instructions ...	35.66 (22.82)	41.64 (19.74)	33.78 (16.70)	42.04 (13.00)	42.54 (17.19)	40.71 (15.54)	40.62 (18.55)	31.56 (16.71)	30.31 (20.93)
Percent who think students often get into fights	18.99 (16.62)	22.33 (16.13)	17.10 (15.18)	31.53 (19.81)	22.78 (14.19)	21.76 (13.89)	16.80 (11.68)	14.04 (10.90)	11.70 (14.16)
Percent who think students often threaten teachers	3.54 (5.11)	4.05 (5.91)	3.30 (3.96)	3.70 (3.69)	3.03 (5.04)	3.31 (4.49)	3.34 (6.42)	1.60 (2.76)	2.39 (4.76)

NOTE: Variables are defined in appendix A. Table entries were calculated using school weights.

[1] Standard deviations are in parentheses.

Table 4.23.--Means and standard deviations of school-level measures of sophomores' perceptions of selected school problems, by school enrollment: Spring 1980

Sophomores' perception of school problems	School enrollment						
	0-249	250-499	500-749	750-1,499	1,500-2,249	2,250-2,999	3,000+
Sample size	74	95	98	300	224	95	29
Percent who think students often don't attend school	19.32 1/ (17.76)	28.86 (18.26)	35.20 (19.41)	43.56 (19.21)	48.72 (17.18)	51.42 (15.54)	51.72 (16.25)
Percent who think students often cut classes	19.05 (18.12)	34.63 (23.31)	41.89 (23.20)	59.30 (21.33)	69.44 (15.09)	75.06 (14.46)	73.86 (13.44)
Percent who think students often talk back	20.06 (15.37)	23.36 (12.51)	25.17 (13.81)	28.84 (11.81)	29.97 (13.04)	31.98 (13.57)	36.27 (14.38)
Percent who think students often disobey instruction ..	35.99 (22.62)	36.92 (16.71)	38.26 (17.31)	39.76 (14.45)	39.70 (13.56)	41.10 (15.07)	46.79 (15.28)
Percent who think students often get get into fights	11.90 (13.89)	18.78 (13.11)	20.55 (12.70)	26.54 (14.49)	25.77 (14.79)	33.40 (16.71)	32.27 (13.95)
Percent who think students often threaten teachers ...	2.34 (5.57)	2.79 (3.70)	3.41 (4.52)	3.78 (4.58)	4.05 (5.12)	6.38 (7.18)	8.68 (8.05)

NOTE: Variables are defined in appendix A. Table entries were calculated using school weights.

1/ Standard deviations are in parentheses.

who describe these problems as occurring "often" more frequently than most regions. Students from this region are most likely to say that fights occur often, and most likely to say that students often talk back to teachers. For the other two activities, the average in this region is the second highest of all the regions.

Finally, as shown in table 4.23, the percentage of sophomores who feel that each of the six activities occurs often increases with school enrollment. For attendance, class-cutting, fighting, and attacks or threatened attacks against teachers, the increase over the seven school-size categories is impressive. For talking back to teachers and disobeying teachers' instructions the increase with enrollment is also monotonic.

4.4.2 School Administrators' Perceptions

The evaluations by school administrators of school problems were scaled by assigning the values "1" to "serious," "2" to "moderate" "3" to "minor," and "4" to "not at all." Mean scores of schools classified by type of community, type of school, geographic region, and school enrollment are displayed in tables 4.24 through 4.27.

The quantities in table 4.24 show that there is remarkable uniformity among school administrators in urban, suburban, and rural communities in the way they would characterize each of the listed activities. Public school administrators, however, consistently describe their problems as more serious than administrators in Catholic or other private high schools (table 4.25). The latter two groups alternate for the lowest position.

The comparisons by region in table 4.26 indicate that Mountain school administrators give their schools poorer ratings on attendance than do administrators from other regions. However, reports from the East South Central schools are higher than can be explained by the student self-reports, which

Table 4.24.--Means and standard deviations of school administrator's reports of the seriousness of school problems, by type of community: Spring 1980[1]

School problem	Type of community		
	Urban	Suburban	Rural
Sample size	242	476	269
Absenteeism	2.55 (0.94)[2]	2.44 (0.71)	2.61 (0.74)
Class-cutting	2.83 (0.89)	2.72 (0.74)	2.96 (0.73)
Physical conflicts among students	3.30 (0.62)	3.23 (0.51)	3.27 (0.57)
Conflicts between students and teachers	3.20 (0.54)	3.16 (0.46)	3.23 (0.55)
Robbery or theft	2.94 (0.74)	2.87 (0.60)	2.98 (0.54)
Vandalism of school property	2.81 (0.71)	2.82 (0.59)	2.89 (0.57)
Student use of drugs or alcohol .	2.69 (0.72)	2.50 (0.69)	2.62 (0.70)
Verbal abuse of teachers	3.11 (0.72)	3.13 (0.60)	3.28 (0.53)

NOTE: Variables are defined in appendix A.Table entries were calculated using school weights.

[1] The scale was scored: 1 = serious, 2 = moderate, 3 = minor, 4 = not at all.

[2] Standard deviations are in parentheses.

Table 4.25.--Means and standard deviations of school administrator's reports of the seriousness of school problems, by type of school: Spring 1980 1/

School problem	Type of school		
	Public	Catholic	Other private 2/
Sample size	869	83	36
Absenteeism	2.38 (0.73) 3/	3.09 (0.62)	3.11 (0.61)
Class-cutting	2.70 (0.76)	3.44 (0.58)	3.35 (0.48)
Physical conflicts among students	3.17 (0.55)	3.63 (0.48)	3.56 (0.50)
Conflicts between students and teachers	3.16 (0.52)	3.42 (0.49)	3.29 (0.46)
Robbery or theft	2.88 (0.57)	3.09 (0.71)	3.13 (0.67)
Vandalism of school property	2.80 (0.60)	3.07 (0.58)	3.05 (0.53)
Student use of drugs or alcohol .	2.49 (0.69)	2.82 (0.70)	2.99 (0.59)
Verbal abuse of teachers	3.14 (0.58)	3.49 (0.59)	3.35 (0.58)

NOTE: Variables are defined in appendix A. Table entries were calculated using school weights.

1/ The scale was scored: 1 = serious, 2 = moderate, 3 = minor, 4 = not at all.

2/ Because of the small school sample size, the heterogeneity of the schools, and the high nonresponse rate for schools in this sector, the estimates for other private schools are not nearly as accurate or as interpretable as those for public or Catholic schools.

3/ Standard deviations are in parentheses.

Table 4.26.--Means and standard deviations of school administrator's reports of the seriousness of school problems, by region: Spring 1980[1]

School problem	Region								
	New England	Middle Atlantic	South Atlantic	East South Central	West South Central	East North Central	West North Central	Mountain	Pacific
Sample size	52	158	148	51	104	199	77	53	146
Absenteeism	2.51 (0.68)[2]	2.72 (0.74)	2.52 (0.78)	2.10 (0.59)	2.61 (0.75)	2.52 (0.71)	2.68 (0.72)	2.07 (0.79)	2.62 (0.82)
Class-cutting	2.93 (0.55)	2.85 (0.86)	2.83 (0.77)	2.79 (0.67)	2.89 (0.69)	2.81 (0.78)	3.07 (0.75)	2.54 (0.68)	2.78 (0.83)
Physical conflicts among students	3.28 (0.59)	3.17 (0.58)	3.24 (0.53)	3.06 (0.63)	3.10 (0.46)	3.28 (0.52)	3.50 (0.55)	3.48 (0.54)	3.25 (0.60)
Conflicts between students and teachers	3.29 (0.53)	3.31 (0.53)	3.05 (0.40)	2.97 (0.46)	3.20 (0.43)	3.19 (0.52)	3.20 (0.63)	3.17 (0.44)	3.38 (0.53)
Robbery or theft	2.90 (0.52)	2.83 (0.56)	2.96 (0.54)	2.74 (0.52)	2.94 (0.66)	2.89 (0.49)	3.09 (0.63)	2.92 (0.56)	2.99 (0.74)
Vandalism of school property	2.85 (0.50)	2.83 (0.80)	2.76 (0.55)	2.83 (0.45)	2.78 (0.51)	2.76 (0.49)	3.07 (0.61)	3.05 (0.62)	2.88 (0.65)
Student use of drugs or alcohol	2.61 (0.60)	2.60 (0.70)	2.62 (0.61)	2.73 (0.78)	2.68 (0.81)	2.45 (0.57)	2.58 (0.76)	2.72 (0.67)	2.52 (0.67)
Verbal abuse of teachers .	3.17 (0.60)	3.16 (0.67)	3.06 (0.51)	3.25 (0.51)	3.27 (0.58)	3.06 (0.52)	3.25 (0.58)	3.54 (0.55)	3.24 (0.68)

NOTE: Variables are defined in appendix A. Table entries were calculated using school weights.

[1] The scale was scored: 1 = serious, 2 = moderate, 3 = minor, 4 = not at all.

[2] Standard deviations are in parentheses.

Table 4.27.--**Means and standard deviations of school administrator's reports of the seriousness of school problems, by school enrollment: Spring 1980** 1/

School problem	School enrollment						
	0-249	250-499	500-749	750-1,499	1,500-2,249	2,250-2,999	3,000+
Sample size	75	96	100	303	227	97	29
Absenteeism	2.87 (0.74) 2/	2.45 (0.61)	2.53 (0.72)	2.33 (0.73)	2.09 (0.68)	2.02 (0.75)	1.98 (0.95)
Class-cutting	3.25 (0.57)	2.95 (0.68)	2.82 (0.75)	2.49 (0.71)	2.23 (0.68)	2.02 (0.72)	2.05 (0.71)
Physical conflicts among students	3.48 (0.57)	3.30 (0.53)	3.19 (0.47)	3.11 (0.48)	2.99 (0.47)	2.99 (0.53)	2.69 (0.67)
Conflicts between students and teachers	3.29 (0.56)	3.20 (0.45)	3.17 (0.52)	3.16 (0.50)	3.14 (0.49)	3.15 (0.57)	2.94 (0.50)
Robbery or theft	3.17 (0.60)	2.83 (0.63)	2.92 (0.40)	2.81 (0.51)	2.69 (0.61)	2.71 (0.6[illegible])	2.39 (0.66)
Vandalism of school property	3.13 (0.54)	2.75 (0.59)	2.89 (0.48)	2.72 (0.51)	2.58 (0.58)	2.47 (0.64)	2.42 (0.58)
Student use of drugs or alcohol	2.88 (0.76)	2.53 (0.58)	2.46 (0.55)	2.38 (0.61)	2.39 (0.61)	2.40 (0.59)	2.27 (0.44)
Verbal abuse of teachers	3.39 (0.59)	3.24 (0.55)	3.19 (0.63)	3.07 (0.57)	2.92 (0.53)	2.73 (0.59)	2.73 (0.52)

NOTE: Variables are defined in appendix A. Table entries were calculated using school weights.

1/ The scale was scored: 1 = serious, 2 = moderate, 3 = minor, 4 = not at all.

2/ Standard deviations are in parentheses.

was also true for the sophomore evaluations of attendance problems. Administrators' evaluations of the amount of fighting by students also matches sophomores' perceptions in this regard. The East South Central schools get the poorest ratings for fights among students. In addition, these schools receive the worst rating for student-teacher conflicts and for robbery and vandalism. No region consistently has the lowest levels of school problems.

Finally, the perceptions of administrators show the same persistent variation with school enrollment that the perceptions of sophomores do. Larger schools are perceived to have greater problems on all the measures displayed in table 4.27.

4.5 Effects of School Structure on Sophomores' Perceptions of School Problems

In order to examine the independent effects of school structure on sophomore perception of behavior problems, we followed the same strategy used earlier in the chapter. The percentage of sophomores responding that an activity occurred "often" in a high school was regressed on the list of school and student characteristics discussed earlier (scaled in the manner described earlier). The results of the regressions are presented in table 4.28. The regressions show that attendance problems and the frequency of fights get worse in larger schools, according to sophomores. The results further show that Catholic and private school differences are very large even when other factors are controlled. Urban schools are perceived by sophomores to have a lower frequency of all six activities than both suburban and rural schools, with the effects of urban location on class-cutting, fighting, and talking back being particularly strong. Suburban schools are also perceived to have less class-cutting than rural schools, when other factors are taken into account. The independent effects of the region variables are different from the unadjusted region effects. East South Central schools were perceived to

Table 4.28.--Regression coefficients for school-level measures of sophomores' perceptions of the indicated school problems, regressed on selected school, student body academic environment, and sophomore student body family background characteristics: Spring 1980 1/

Independent variables	Dependent variable 2/											
	Percent who think students often don't attend school		Percent who think students often cut class		Percent who think students often threaten teachers		Percent who think students often get in fights		Percent who think students often disobey instructions		Percent who think students often talk back	
	Coefficient	t-value	Coefficient	t-value	Coefficient	t-value	Coefficient	t-value	Coefficient	t-value	Coefficient	t-value
Intercept	7.11	4.3	1.55	0.6	1.50	2.9	7.017	4.9	4.34	2.4	3.81	2.8
Region:												
New England	0.29	1.1	0.048	0.1	0.29	3.4	0.69	2.9	1.017	3.4	0.93	4.1
Middle Atlantic	-0.25	-1.1	0.097	0.4	0.25	3.7	0.85	4.5	1.27	5.4	0.98	5.5
South Atlantic	-0.71	-3.5	-0.86	-3.2	0.047	0.8	0.026	0.1	0.19	0.8	0.096	0.6
East South Central	-0.47	-1.8	-0.97	-2.8	-0.021	-0.2	1.087	4.8	0.32	1.1	0.37	1.8
East North Central	-0.25	-1.2	-0.43	-1.7	0.12	1.9	0.58	3.4	0.48	2.2	0.40	2.5
West South Central	-0.069	-0.4	-0.67	-2.4	-0.097	-1.5	0.32	1.8	0.28	1.2	0.29	1.8
West North Central	-0.35	-1.7	-0.47	-1.7	0.15	2.2	0.55	2.9	0.41	1.7	0.24	1.4
Mountain	0.02	0.1	-0.095	-0.3	-0.13	-1.6	-0.22	-0.9	-0.41	-1.4	-0.21	-1.0
Type of community:												
Suburban	0.18	1.5	-0.34	-2.1	-0.034	-0.9	-0.18	-1.7	0.061	0.5	-0.094	-0.9
Urban	-0.19	-1.1	-0.53	-2.2	-0.04	-0.7	-0.67	-4.2	-0.21	-1.1	-0.45	-3.0
Type of school:												
Private 3/	-1.35	-5.3	-1.88	-5.4	-0.10	-1.3	-0.53	-2.4	-1.79	-6.3	-0.68	-3.2
Catholic	-2.59	-12.4	-3.31	-11.7	-0.17	-2.5	-0.96	-5.2	-1.45	-6.3	-1.05	-6.0
School enrollment	0.0020	7.4	0.0039	10.7	-0.000020	-0.2	0.00111	4.6	-0.000048	-0.2	0.00033	1.5
School enrollment**2	-4.3 E-07	-5.1	-8.43 E-07	-7.3	1.72 E-08	0.6	-2.01 E-07	-2.7	5.23 E-0[illegible]	0.5	-3.42 E-08	-0.5
Student-staff ratio	0.23	1.7	0.03	0.2	0.024	0.5	-0.066	-0.5	-0.32	-2.0	-0.13	-1.1
Tenure of staff	-0.0015	-0.6	0.0028	0.9	-0.00022	-0.3	-0.00098	-0.5	-0.011	-4.2	-0.0017	-0.8
Percent minority	0.0064	0.9	0.0043	0.4	0.0085	3.7	0.011	1.8	0.013	1.7	0.022	3.6
Percent minority**2	-0.00019	-2.4	-0.000014	-0.1	-0.000072	-2.9	-0.00011	-1.6	-0.00019	-1.7	-0.00020	-3.0
Percent female	0.0013	0.3	0.0098	1.9	-0.0023	-1.8	-0.0078	-2.2	-0.0092	-2.1	-0.0030	-0.9
Average homework	-0.0023	-0.1	0.070	1.5	-0.0044	-0.4	0.036	1.2	0.020	0.5	0.014	0.5
Average early educational expectations	0.34	2.1	0.41	1.8	-0.017	-0.3	0.070	0.5	-0.059	-0.3	-0.016	-0.1
Percent academic program	0.017	0.5	-0.11	-2.4	-0.029	-2.8	-0.023	-0.8	-0.056	-1.5	-0.044	-1.6
Average verbal score	-0.28	-2.5	-0.42	-3.1	-0.032	-0.9	-0.083	-0.8	-0.41	-3.3	-0.26	-2.8
Average math score	-0.17	-3.2	-0.054	-0.8	-0.036	-2.2	-0.15	-3.3	-0.10	-1.8	-0.078	-1.8
Average family income	0.000018	1.0	0.000071	3.0	0.000013	2.3	-0.000023	-1.5	0.000044	2.2	0.000044	3.0
Average father's education	-0.25	-2.5	0.00030	0.0	-0.024	-0.8	-0.050	-0.6	0.019	0.2	-0.16	-2.0
Percent professional fathers	-1.15	-1.5	-1.44	-1.4	-0.36	-1.5	-0.84	-1.2	-1.72	-2.1	-0.71	-1.1
Percent blue collar fathers	0.18	0.4	-1.51	-2.1	-0.46	-2.7	-0.21	-0.4	0.27	0.5	0.53	1.2
Percent farm fathers	-1.29	-2.1	-3.35	-4.1	-0.46	-2.4	-2.07	-3.9	0.70	1.1	-1.27	-2.5
Percent father present	-1.46	-2.2	-0.68	-0.8	-0.37	-1.8	-0.043	-0.1	-0.50	-0.7	-0.95	-1.8
Percent mother present	1.44	1.4	3.036	2.2	0.041	0.1	-2.042	-2.3	3.22	2.9	2.80	3.3
Percent parents do not know	2.09	3.7	1.84	2.4	-0.044	-0.2	-0.63	-1.2	0.83	1.3	-0.35	-0.8
Percent parents do not monitor	0.12	0.1	-0.37	-0.4	-0.15	-0.6	-0.034	-0.1	-0.85	-0.9	0.97	1.4
R^2	.62		.60		.22		.45		.40		.43	
Dependent variable statistics: Mean (standard deviation)	31.79 (20.90)		39.26 (27.59)		24.76 (14.45)		38.16 (18.55)		19.29 (15.24)		31.72 (5.02)	

NOTE: Variables are defined in appendix A. Table entries were calculated using school weights. The number of cases used in the calculations differs slightly from the total number of schools (1,015) due to item nonresponse. T-values have been corrected for item nonresponse as described in the technical note to chapter 1. Appendix A indicates which independent variables were rescaled for regression analysis.

1/ Coefficients were obtained using generalized least squares.

2/ Regressions were carried out on the percent of sophomores who said that each activity "often" happens divided by ten. To compute expected percents, the results of a calculation should be multiplied by ten. T-values are unaffected by the rescaling.

3/ Because of the small school sample size, the heterogeneity of the schools, and the high nonresponse rate for schools in this sector, the estimates for other private schools are not nearly as accurate or as interpretable as those for public or Catholic schools.

have relatively high levels of absenteeism by the sophomores, but the independent effect of East South Central is the second most negative of all the region dummy variables.

Both the tenure of teachers and the student-staff ratio have their strongest effect on sophomore perceptions of obedience: sophomores in schools with a larger ratio of students to staff and in schools where the staff has been at the school for a longer time feel that disobedience occurs less frequently.

Finally, the racial and ethnic composition of the student body affects sophomore perceptions of some forms of misbehavior. In every case, schools that are racially homogeneous are seen by students as having a lower frequency of misbehavior than are schools where the proportions of white students and students of other races are about equal. The pattern is particularly pronounced for threatening teachers, disobeying instructions, and talking back to teachers, and for students getting into fights with each other.

4.6 The Accuracy of Sophomores' Perceptions of School Problems

The question of the accuracy of the sophomores' and administrators' evaluations of school problems still remains. The fact that we have both self-reports and evaluations of attendance problems can give some preliminary insight into the question. We repeated the analysis of table 4.28 for the evaluations of absenteeism and class-cutting, but adding the ten rates of self-reported misbehaviors from the sophomores and seniors to the equation. For both regressions, all forms of self-reported misbehavior were computed separately for sophomores and seniors and included as independent variables. The self-report measures of absenteeism and class-cutting were not by themselves perfect indicators of these two activities. Since all forms of misbehavior about which High School and Beyond provides information are correlated, the inclusion of all self-reports as independent variables should increase the ability to control for the actual level of each form of behavior when estimating the effects of other school and student body characteristics.

The results of the analysis are presented in table 4.29. They suggest that larger schools are perceived by sophomores to have worse problems than they actually do. They further suggest that Catholic and other private schools are viewed by sophomores in an overly generous light. After controlling for self-reported behavior, Catholic schools on the average have more than 20 percentage points fewer sophomores who say that either absenteeism or class-cutting occur often than do public schools. Students in urban and, to a lesser extent, suburban schools also appear to have an overly favorable opinion of their schools. Finally, the minority composition of the school appears to shape student opinion independently of the actual level of misbehavior in the high school.

Some of these effects may reflect the inability of the self-report measures to account completely for the level of misbehavior in the school. But is it hard to escape the conclusion that the perceptions of students are shaped by the school context. Comparisons of schools on the basis of student evaluations should therefore be approached with some caution as long as the researcher is not sure about the exact nature of the process by which these perceptions are formed.

4.7 Conclusion

The results of the chapter have demonstrated that the level of misbehavior in school and perceptions about student misbehavior vary systematically with a number of important school characteristics. Based on student self-

Table 4.29.--Regression coefficients for school-level measures of sophomores' perceptions of absenteeism and class-cutting, regressed on selected school, student body academic environment, and sophomore student body family background characteristics, and selected sophomore and senior student body behaviors: Spring 1980[1/]

Independent variables	Dependent variable [2/]			
	Percent who think students often don't attend school		Percent who think students often cut class	
	Coefficient	t-value	Coefficient	t-value
Intercept	4.56	2.7	-3.24	1.7
Region:				
New England	0.45	1.7	0.58	1.8
Middle Atlantic	-0.24	-1.1	0.34	1.4
South Atlantic	-0.37	-1.8	0.043	0.2
East South Central	-0.10	-0.4	0.01	0.1
East North Central	-0.12	-0.6	0.05	0.2
West South Central	0.049	0.2	-0.16	-0.6
West North Central	-0.21	-0.9	-0.037	-0.1
Mountain	-0.16	-0.6	-0.45	-1.5
Type of community:				
Suburban	0.19	1.6	-0.33	-2.2
Urban	-0.17	-0.9	-0.56	-2.7
Type of school:				
Private 3/	-1.15	-4.5	-1.83	-6.0
Catholic	-2.13	-9.9	-2.19	-8.6
School enrollment	0.0017	6.6	0.003	9.4
School enrollment**2	-3.86 E-07	-4.6	-6.76 E-07	-6.8
Student-staff ratio	0.24	1.7	0.11	0.6
Tenure of staff	-0.00036	-0.2	0.0043	1.5
Percent minority	0.014	1.9	0.012	1.4
Percent minority**2	-0.00023	-2.9	-0.000021	-0.2
Percent female	0.0016	0.4	0.0097	2.1
Average homework	0.008	0.2	0.066	1.6
Average early educational expectations	0.30	1.8	0.085	0.4
Percent academic program	0.02	0.6	-0.08	-1.4
Average verbal score	-0.26	-2.4	-0.44	-3.4
Average math score	-0.041	-0.8	0.18	2.8
Average family income	0.0000061	0.4	0.000025	1.2
Average father's education ..	-0.25	-2.5	0.0088	0.1
Percent professional fathers	-1.36	-1.8	-1.16	-1.3
Percent blue collar fathers .	0.28	0.5	-0.48	-0.8
Percent farm fathers	-1.46	-2.4	-2.80	-3.9
Percent father present	-0.90	-1.4	0.0094	0.0
Percent mother present	1.41	1.4	3.29	2.8

(Table continued on next page.)

Table 4.29.--Regression coefficients for school-level measures of sophomores' perceptions of absenteeism and class-cutting, regressed on selected school, student body academic environment, and sophomore student body family background characteristics, and selected sophomore and senior student body behaviors: Spring 1980[1/]--(Continued)

Independent variables	Dependent variable [2/]			
	Percent who think students often don't attend school		Percent who think students often cut class	
	Coefficient	t-value	Coefficient	t-value
Percent parents do not know .	1.47	2.5	-0.22	-0.3
Percent parents do not monitor	-0.14	-0.2	-0.14	-0.1
Average days absent--sophs ..	0.13	2.7	0.047	0.8
Average days late--sophs	-0.10	-2.1	-0.045	-0.8
Percent who cut class--sophs	0.13	3.0	0.50	9.5
Percent who don't do assigned homework--sophs ..	0.83	0.9	-0.37	-0.4
Percent who have been in serious trouble with the law--sophs	0.087	0.8	-0.021	-0.2
Average days absent--seniors	0.099	2.1	-0.023	-0.4
Average days late--seniors ..	-0.044	-1.2	-0.015	-0.4
Percent who cut class--seniors	0.057	1.5	0.28	6.2
Percent who don't do assigned homework--seniors.	0.34	0.4	1.31	1.2
Percent who have been in serious trouble with the law--seniors	0.051	0.5	-0.088	-0.6
R^2	.64		.71	
Dependent variable statistics: Mean (Standard deviation)	31.79 (20.90)		39.26 (27.59)	

NOTE: Variables are defined in appendix A. Table entries were calculated using school weights. The number of cases used in the calculations differs slightly from the total number of schools (1,015) due to item nonresponse. T-values have been corrected for item nonresponse as described in the technical note to chapter 1. Appendix A indicates which independent variables were rescaled for regression analysis.

1/ Coefficients were obtained using generalized least squares.

2/ For the percent variables, the regression was carried out on the quantity divided by ten. To compute expected percents, the results of a calculation should be multiplied by ten. T-values are unaffected by the rescaling.

3/ Because of the small school sample size, the heterogeneity of the schools, and the high nonresponse rate for schools in this sector, the estimates for other private schools are not nearly as accurate or as interpretable as those for public or Catholic schools.

reports, urban schools have worse attendance problems than suburban schools. When controls are used, the effect of both urban and suburban locations on the amount of absenteeism and tardiness in a high school is positive. Despite the evidence of behavioral reports, sophomores in urban schools in particular do not judge these problems as occuring often. The contradictory findings of self-reports and perceptions of absenteeism and class-cutting suggest that urban sophomores' perceptions may not accurately reflect the actual level of misbehavior in these high schools.

Catholic schools especially, but also other private schools generally, have less misbehavior than do public schools. The differences cannot be explained by student characteristics to the extent that they could be controlled with measures from the High School and Beyond study. The results suggest, however, that the difference in rates of misbehavior between public and private schools is not as extreme as the perceptions of the sample sophomores would indicate.

Levels of misbehavior vary by geographic region. Western schools have the worst attendance records, according to the present results. Based on unadjusted scores, southern schools are more likely than other schools to be evaluated by sophomores as having problems with fights, disobedience, and talking back to teachers. The unadjusted low student evaluations for East South Central schools can be explained by other school and student body characteristics, however. The New England and Middle-Atlantic schools have the highest adjusted rates for these last three activities.

Larger schools have greater attendance problems than smaller schools. Furthermore, larger schools are more likely to be poorly evaluated by sophomores and administrators than smaller schools. Among the self-reported activities, the independent effect of school size is important only for class-cutting and the percentage who don't do assigned homework. The rate of refusal to do assigned homework actually falls with school size. School enrollment is more important when student perceptions are examined. The independent effect of school size on perceived absenteeism is strong and positive, as it is on the frequency of perceived class-cutting and fights. But the results of the analysis imply that large schools may get less credit than they deserve from sophomores.

The analysis has shown that the ratio of students to staff in a high school is not in general an important predictor of behavior problems. The tenure of the faculty has stronger effects, though we cannot determine whether a more stable faculty results in less misbehavior or whether the faculty is more stable in schools where the students are better behaved.

The percentage of minority students in a high school is not a strong predictor of the level of misbehavior when other factors are controlled, with the partial exception of sophomore rates of absenteeism and senior attendance problems. The effect of minority composition on student perceptions is in several cases reasonably large. Sophomores perceive problems in student-staff relations to be greatest in schools with roughly equal numbers of white students and students of other races. The effect of percent minority on sophomore perceptions of absenteeism persists when self-reports for sophomores and seniors are controlled, which suggests that the racial and ethnic composition of the high school may be one of the factors that shape student perceptions of the climate of a high school.

CHAPTER 5

MISBEHAVIOR AND THE DISCIPLINARY CLIMATE OF THE HIGH SCHOOL

This chapter turns to the relationship between the disciplinary climate of a school and the misbehavior of its student body.

We argued earlier in this report that students would be motivated to conform their behavior to conventional school standards if they thought they would benefit from their education. Compared to students with a low investment in their education, students with a greater investment might perceive the costs of misbehavior, measured as damage to their educational chances, to be greater. If higher academic performance is linked with a heightened identification with the school, such students might feel either a greater satisfaction as a result of conforming behavior, or greater guilt as a result of misbehavior. This suggests that a school might be able to increase the level of students' conformity to school rules by increasing the value of their educational experience. We cannot directly assess the value of this strategy in this report.

But a school might also be able to increase the level of conformity in the school by increasing the direct costs attached to misbehavior; and in this chapter we do attempt a preliminary assessment of the effects of maintaining a strict disciplinary climate. To undertake such an effort naturally requires information about the strictness of the disciplinary climate of a school. As the discussion in this chapter will make clear, this is not an easy quality to measure. Nonetheless, the High School and Beyond study contains some information which is related to the disciplinary climate of a school. School administrators and students were asked whether or not each of these five rules was enforced:

1. School grounds closed to students at lunch
2. Hall passes required

3. "No smoking" rules
4. Rules about student dress
5. Students responsible to the school for property damage.

The first two rules control movement of students. The next two establish standards for student deportment. Both restrict the autonomy of students, and the prohibition of smoking may have symbolic importance since cigarette smoking is often seen as an adult perogative.

Students' direct experience with school disciplinary procedures was obtained through self-reports of whether the student had had disciplinary problems in the last year or had been suspended or put on probation. In addition, students were asked to evaluate several aspects of the school's disciplinary procedures. Taken together, information about misbehavior on the part of the students and about disciplinary actions on the part of the school permits a description of the disciplinary climate of a school.

- The first section of this chapter describes the association between reports of misbehavior and of experience with being disciplined by the school, at the student level. The idea of the disciplinary climate of a school is developed in a general discussion of the relationship between student body misbehavior and discipline at the school level.
- In the second section, the characteristics of schools that enforce the rules included in the High School and Beyond questionnaire are described.
- The distribution of school-level of measures of student misbehavior by the school administrator's report of whether or not rules are enforced is presented in the third section. The analysis in this section asks whether schools that enforce rules have less misbehavior than those that do not, and whether the relationship between rule enforcement and misbehavior is affected when characteristics of school structure are controlled for.

. The determinants of student perceptions of rule enforcement are explored in the fourth section. Schools in which the administrator reports each rule is enforced are singled out so that the factors which result in the perception of rule enforcement by students can be described.

Finally, student perceptions of the fairness and effectiveness of school discipline are examined.

5.1 Discipline, Misbehavior, and the School's Disciplinary Climate

One source of information about a school's disciplinary climate is student reports about their own punishment. Students in the study were asked two questions about whether they had been punished by the school. They were asked to say whether they "have had disciplinary problems in school during the last year," and whether they had been "suspended or put on probation while in high school." The first of these items is somewhat ambiguous. Students could interpret the item to mean that they had been disciplined by school authorities, or that they had often acted in a way that was contrary to school rules of conduct even if they had not been caught or disciplined. We suspect that students would more often apply the first interpretation, and so have used the item as a measure of whether or not a student has been reprimanded or disciplined by school authorities. The second item is more exact. It clearly refers to serious negative sanctions applied by the school. However, the question is flawed because it does not distinguish between academic and nonacademic suspension or probation.

5.1.1 Association between Reports of Misbehavior and of Being Disciplined

The relationship between misbehavior and disciplinary action is difficult to analyze with cross-sectional data. The use of negative sanctions in a high school can be as much a response to as a determinant of student behavior. So, while students may be deterred from misbehaving by the threat of punishment, correlations will not necessarily reveal this fact. Tables 5.1 and 5.2 show that the conditional probability that a sophomore or senior will respond that he or she has had disciplinary problems or has been suspended or put on probation is much higher for students who have misbehaved than it is for all students taken together. We expected this result: if a school is administering discipline in a fair way, it should punish those students who have done something wrong and not those who have behaved in accordance with school policy. These tables also show that the students who have been punished are also more likely than the average student to have done something wrong. Table 5.3 makes the same point on the school level. The correlation between the level of each type of misbehavior and the percentage of sample sophomores or seniors who have been disciplined is positive.

5.1.2 Misbehavior and the Strictness of the School's Disciplinary Climate

If punishment effectively deterred misbehavior in school, one would expect that the more consistently a school punished misbehavior the better-behaved would be its student body. To isolate the effects of a policy on behavior, the researcher would ideally use longitudinal data. There are two different ways in which the effects of a policy on behavior could then be examined. The obvious method would be to measure behavior before and after a policy change and see if behavior changes. A more indirect approach would be to determine the behavior patterns of students in different high schools at the start of their school experience, and then observe their responses to different school policies over the course of their high school career.

Because only cross-sectional data are currently available from the High School and Beyond Study, we cannot directly observe change. Furthermore, the first method would almost never be practical, because a researcher does not have control over school policies. The second method is more feasible in

Table 5.1.--Estimates of conditional probabilities that sophomores have misbehaved in one way, given that they have misbehaved in another way: Spring, 1980 1/

Probability that a sophomore has misbehaved in one of these ways:	Given that the sophomore has misbehaved in one of these ways:								Unconditional probability 2/
	Cuts class	Doesn't do assigned homework	Days absent:		Days late:	Has been in serious trouble with the law	Has had disciplinary problems	Has been suspended or put on probation	
			5 or more	11 or more	5 or more				
Cut class							.532	.575	.301
Doesn't do assigned homework							.107	.116	.045
Days absent: 5 or more							.307	.341	.173
Days absent: 11 or more							.137	.154	.060
Days late: 5 or more							.254	.278	.138
Has been in serious trouble with the law							.141	.182	.053
Has had disciplinary problem .	.338	.471	.348	.455	.358	.508	1.000	.570	.190
Has been suspended or put on probation	.233	.327	.247	.326	.250	.417	.365	1.000	.122

NOTE: Variables are defined in appendix A. Table entries were calculated using student weights.

1/ Estimated conditional probabilities are the number of students who indicated that they had done both a row and a column behavior, divided by the number who indicated that they had done the column behavior. Thus, the conditional probability that a sophomore "has had disciplinary problems" given that he or she "cuts class," is estimated to be .338.

2/ The denominator for this column is the total (weighted) number of sophomores. The number of cases used in the calculation of each entry differs slightly from the total number of sophomores (30,263) due to item nonresponse.

Table 5.2.--Estimates of conditional probabilities that seniors have misbehaved in one way, given that they have misbehaved in another way: Spring, 1980 1/

Probability that a senior has misbehaved in one of these ways:	Given that the senior has misbehaved in one of these ways:								Unconditional probability 2/
	Cuts class	Doesn't do assigned homework	Days absent: 5 or more	Days absent: 11 or more	Days late: 5 or more	Has been in serious trouble with the law	Has had disciplinary problems	Has been suspended or put on probation	
Cut class							.668	.684	.448
Doesn't do assigned homework							.104	.096	.040
Days absent: 5 or more							.375	.349	.212
Days absent: 11 or more							.163	.148	.070
Days late: 5 or more							.329	.323	.193
Has been in serious trouble with the law							.125	.138	.040
Has had disciplinary problem .	.204	.361	.244	.321	.234	.435	1.000	.445	.137
Has been suspended or put on probation	.192	.307	.208	.268	.211	.442	.409	1.000	.126

NOTE: Variables are defined in appendix A. Table entries were calculated using student weights.

1/ Estimated conditional probabilities are the number of students who indicated that they had done both a row and a column behavior, divided by the number who indicated that they had done the column behavior. Thus, the conditional probability that a senior "has had disciplinary problems," given that he or she "cuts class," is estimated to be .204.

2/ The denominator for this column is the total (weighted) number of seniors. The number of cases used in the calculation of each entry differs slightly from the total number of seniors (28,465) due to item nonresponse.

Table 5.3.--Means, standard deviations, and correlations between school-level measures of discipline and school-level measures of selected types of misbehavior, by educational cohort: Spring 1980

Variable	Educational Cohort							
	Sophomores				Seniors			
	Mean	Standard deviation	Correlation with:		Mean	Standard deviation	Correlation with:	
			Percent who have had disciplinary problems	Percent who have been suspended or put on probation			Percent who have had disciplinary problems	Percent who have been suspended or put on probation
Average days absent	2.9	1.7	.34***1/	.46***	3.4	1.5	.30***	.13***
Average days late	2.5	2.1	.28***	.40***	3.3	2.4	.26***	.00
Percent who cut class	25.3	17.3	.33***	.42***	40.0	19.0	.23***	.06
Percent who don't do assigned homework ...	4.8	6.7	.33**	.22***	4.9	5.8	.00	.20**
Percent who have been in serious trouble with the law	5.8	6.0	.39***	.51***	4.3	5.2	.44***	.23***
Percent who have had disciplinary problems ..	19.5	10.2	--	--	14.4	10.1	--	--
Percent who have been suspended or put on probation	11.9	9.5	--	--	12.4	9.0	--	--

NOTE: Variables are defined in appendix A. Table entries were calculated using school weights. The number of cases used in the calculation of each coefficient may differ slightly from the total number of schools (1,015), due to item nonresponse.

1/ Asterisks were used to indicate the probability that the sample correlation would be larger in absolute value than the quantity obtained under the hypothesis that the true correlation is zero, as follows: *** indicates p < .001; ** indicates p < .01; * indicates p < .05.

principle, though still not possible at present, because we lack information on the cohort at two points in time.

The High School and Beyond data do allow us to compare senior and sophomore rates of misbehavior at different levels of sophomore punishment. That is, they allow us to answer the question: if one controls for the amount of sophomore misbehavior in a school, is there any tendency for senior levels of misbehavior to be lower in schools that discipline a higher proportion of sophomores? If students adjust their behavior in response to school policies slowly, such a comparison might show the extent to which the school's policy had paid dividends by the end of the student's high school career.

This type of comparison is hardly a foolproof method of evaluating the effectiveness of punishment. If students respond to the threat of punishment rapidly, then the sophomores would already have adjusted to the disciplinary climate of the school and senior-sophomore comparisons could not be expected to reveal the size of the adjustment. Futhermore, the High School and Beyond measures of sophomore misbehavior are not perfect. Therefore, one could argue that sophomores in one school with specified rates of punishment and measured misbehavior have higher rates of actual misbehavior than another school's sophomores who have the same rate of measured misbehavior but a lower rate of punishment. Thus, controlling for measured sophomore misbehavior, we would expect an upward bias in rates of measured senior misbehavior with high rates of sophomore punishment, because of measurement error. Finally, the problem of the dropout and expulsion rate still remains. If schools with higher punishment levels have higher dropout rates, and if students who drop out are more likely to misbehave, then the comparisons will be contaminated.

Despite the limitations of this method of analysis, we felt that the comparisons would convey useful information. Accordingly tables 5.4 through 5.6

shows comparisons of senior levels of absenteeism, tardiness, and class-cutting, measured on the school level and classified according to the level of sophomore misbehavior and the disciplining of sophomores. The measure of discipline was the percentage of sample sophomores in the school who reported either that they have had disciplinary problems while in high school or that they have been suspended or put on probation while in high school. The measure of misbehavior was the percentage of sophomores who said that they had been absent for five or more days between the start of school and Christmas vacation or had been late on at least five days during the same period, or that they cut class "every once in a while," or that they don't do homework even though it is assigned. In the average school, 24.5 percent of the sophomores had been disciplined according to this measure, while 40.4 percent had misbehaved.

Tables 5.4 through 5.6 show that, while the scores are rarely monotonic in any column, the level of senior misbehavior has a modest tendency to decrease as the rate of disciplining of sophomores increases. This pattern can be seen more easily if the lowest three and the highest three categories of the measure of the level of discipline are collapsed and the means compared. The calculations are presented in tables 5.7 through 5.9. In most of the comparisons (thirteen of twenty-one) seniors misbehave less in schools that punish sophomores more. The tendency is strongest among the schools with moderate levels of misbehavior, that is, schools with from 15 to 55 percent of the sophomores misbehaving. In nine of these twelve comparisons, senior rates are lower in the stricter schools. The scores in the anomalous group (25 to 35 percent misbehaving, 25 to 55 percent disciplined) are higher than expected. Note, however, that, while senior rates generally increase in step with increases in sophomore rates, senior rates in the anomalous category are

Table 5.4.--Group means of school-level measure of average days absent for seniors, with schools classified by the percent of sophomores in the school who have been disciplined and the percent who have misbehaved: Spring 1980

Percent disciplined	Percent misbehaved					
	0-15	15-25	25-35	35-45	45-55	55-100
0-15	(13) 1/ 2.27	(41) 2.98	(41) 2.85	(46) 3.50	(18) 3.46	(27) 4.39
15-25	(16) 2.15	(37) 3.10	(67) 3.22	(81) 3.16	(65) 4.13	(77) 4.22
25-35	(8) 2.24	(24) 2.13	(53) 3.39	(55) 3.04	(66) 3.27	(99) 5.07
35-100	(2) 2.55	(5) 2.03	(13) 2.93	(28) 3.04	(30) 3.33	(88) 4.70

NOTE: Variables are defined in appendix A. Table entries were calculated using school weights.

1/ Sample sizes appear in parentheses.

Table 5.5.--Group means of school-level measure of average days late for seniors, with schools classified by the percent of sophomores in the school who have been disciplined and the percent who have misbehaved: Spring 1980

Percent disciplined	Percent misbehaved					
	0-15	15-25	25-35	35-45	45-55	55-100
0-15	(13) 1/ 1.42	(41) 2.25	(41) 2.33	(46) 3.75	(18) 3.05	(27) 5.54
15-25	(16) 1.63	(37) 2.58	(67) 2.95	(81) 3.54	(65) 4.64	(77) 4.41
25-35	(8) 2.07	(24) 1.42	(53) 2.90	(55) 2.81	(66) 2.76	(99) 6.45
35-100	(2) 0.61	(5) 2.29	(13) 2.47	(28) 1.95	(30) 3.13	(88) 4.58

NOTE: Variables are defined in appendix A. Table entries were calculated using school weights.

1/ Sample sizes appear in parentheses.

Table 5.6.--Group means of school-level measure of percent who cut class for seniors, with schools classified by the percent of sophomores in the school who have been disciplined and the percent who have misbehaved: Spring 1980

Percent disciplined	Percent misbehaved					
	0-15	15-25	25-35	35-45	45-55	55-100
0-15	(13) 1/ 15.05	(41) 34.33	(41) 36.45	(46) 42.09	(18) 51.81	(27) 64.15
15-25	(16) 12.37	(37) 28.99	(67) 36.82	(81) 41.59	(65) 46.20	(77) 58.65
25-35	(8) 13.08	(24) 21.23	(53) 39.79	(55) 33.62	(66) 42.49	(99) 60.71
35-100	(2) 11.20	(5) 24.57	(13) 28.54	(28) 41.87	(30) 36.39	(88) 57.96

NOTE: Variables are defined in appendix A. Table entries were calculated using school weights.

1/ Sample sizes appear in parentheses.

Table 5.7.--Summary of Table 5.4: Groups means of school-level measure of average days absent for seniors, with schools classified by the percent of sophomores in the school who have been disciplined and the percent who have misbehaved: Spring 1980

Percent disciplined	Percent misbehaved						
	0-15	15-25	25-35	35-45	45-55	55-65	65-100
0-25	(28)1/ 2.26	(78) 3.05	(108) 3.07	(127) 3.34	(83) 4.00	(59) 4.00	(45) 4.56
25-100	(9) 2.33	(29) 2.11	(66) 3.31	(83) 3.04	(96) 3.28	(62) 4.11	(124) 5.18

NOTE: Variables are defined in appendix A. Table entries were calculated using school weights.

1/ Sample sizes appear in parentheses.

Table 5.8.--Summary of Table 5.5: Groups means of school-level measure of average days late for seniors, with schools classified by the percent of sophomores in the school who have been disciplined and the percent who have misbehaved: Spring 1980

Percent disciplined	Percent misbehaved						
	5-15	15-25	25-35	35-45	45-55	55-65	65-100
0-25	(28)1/ 1.49	(78) 2.43	(108) 2.69	(127) 3.65	(83) 4.34	(59) 3.73	(45) 5.71
25-100	(9) 1.65	(29) 1.58	(66) 2.83	(83) 2.55	(96) 2.84	(62) 3.73	(124) 6.14

NOTE: Variables are defined in appendix A. Table entries were calculated using school weights.

1/ Sample sizes appear in parentheses.

Table 5.9.--Summary of Table 5.6: Groups means of school-level measure of percent who cut class for seniors, with schools classified by the percent of sophomores in the school who have been disciplined and the percent who have misbehaved: Spring 1980

Percent disciplined	Percent misbehaved						
	5-15	15-25	25-35	35-45	45-55	55-65	65-100
0-25	(28)1/ 14.49	(78) 31.43	(108) 36.66	(127) 41.86	(83) 47.27	(59) 59.42	(45) 60.30
25-100	(9) 12.11	(29) 21.84	(66) 37.85	(83) 36.11	(96) 41.15	(62) 55.57	(124) 60.73

NOTE: Variables are defined in appendix A. Table entries were calculated using school weights.

1/ Sample sizes appear in parentheses.

higher than those in the group with 35 to 45 percent misbehaving sophomores and 25 to 55 percent disciplined sophomores. The rates of senior misbehavior tend to be lower in schools that discipline more sophomores, even though discipline itself indicates misbehavior as we have seen from the correlations above.

We wish to repeat that this measure of the percentage of sophomores misbehaving is hardly comprehensive, so it is unlikely that the level of misbehavior among sophomores in the high schools has been completely controlled. To the extent that the controls are inadequate, a higher rate of sophomores disciplined should be associated with a higher rate of seniors disciplined. We would therefore expect the generally negative relationship between the disciplining of sophomores and the misbehaving of seniors to be stronger if the measures of the concepts were better.

What causes the senior rates of misbehavior to decline as the rate of discipline of sophomores increases? As we noted before, two possibilities are obvious. The first is that schools with strict disiplinary climates--those where misbehavior is punished--gain increased control over their students as time passes. To put it another way, the longer students are exposed to a strict disciplinary climate, the more they are affected by it. An alternative explanation is that schools that punish students more are also more likely to expel unruly students. Such schools would have better-behaved senior classes because they had eliminated the worst of the troublemakers. Since students who have been suspended or have had disciplinary problems might have a greater risk of being expelled, this explanation is also eminently believable.

The tendency for seniors to be better-behaved in stricter schools is not an artifact resulting from the inclusion of sophomores who have been suspended or put on probation in the measure of the percentage of sophomores disciplined, however. Table 5.10 shows that if one restricts attention to a particular type of misbehavior, such as class-cutting, and classifies schools by the percentage of sophomores who say they have had disciplinary problems while in school, the negative relationship between the level of discipline of sophomores and the level of misbehavior of seniors still exists. The data in table 5.10 certainly does not eliminate the possibility that the second explanation is more important. A more conclusive investigation must await the second wave of data from the High School and Beyond Study, at which time it will be possible to compare the behavior of the class of '82 (the sophomores of this report) at two points in time.

An ideal measure with which to investigate the effects of a strict disciplinary climate in a high school would be the conditional probability that a student would be punished in a school, given that he or she misbehaved. An exact measure of this quantity would obviously be unobtainable in the best of circumstances. To construct it, one would need information both on the number of times that each student in the sample had misbehaved during some specific segment of time and on any response by school authorities to the transgressions. In addition, some decision rule regarding the severity of the misbehavior would be needed as a practical matter and its application would require even more information. The task would pose unsatisfiable requirements on the ability of a student to recall and interpret his or her own behavior.

Because of the data limitations, the log of ratio of the number of students disciplined to the number who have misbehaved was used as a measure of the strictness of the school. A measure for the sample sophomores was defined as the log of the number of sophomores who indicated that they had had disciplinary problems in the past year or had been suspended or put on

Table 5.10.--Group means of the school-level measure of the percent who cut class for seniors, with schools classified by the percent of sophomores in the school who have had disciplinary problems while in high school and the percent of sophomores who cut class: Spring 1980

Percent with disciplinary problems--sophomores	Percent who cut class--sophomores				
	0-15	15-25	25-35	35-45	45-100
0-15	(109) 1/ 29.44	(71) 34.36	(82) 45.37	(41) 54.86	(41) 46.14
15-25	(72) 27.92	(96) 38.28	(85) 42.10	(60) 53.01	(74) 64.35
25-35	(27) 26.08	(38) 32.59	(31) 39.79	(40) 47.54	(65) 60.74
35-45	(7) 17.27	(4) 33.05	(12) 39.15	(9) 43.56	(17) 63.58
45-100	(0) --	(1) 38.89	(1) --	(6) 37.79	(11) 68.14

NOTE: Variables are defined in appendix A. Table entries were calculated using school weights.

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[1] Sample size is in parentheses.

probation while in high school to the number who responded that they had been absent at least five days, cut class, or refused to do assigned homework. The log of this measure was used because we did not expect the relationship between the ratio and the independent variables to be linear.

This measure was not used as a predictor of misbehavior in the models presented in the previous chapter. Because its denominator includes basically the same information as the measures of misbehavior used as dependent variables in chapter 4, a negative effect of the log of this ratio would be expected if it had been included in those equations simply because of this redundancy. As a measure of the strictness of school's disciplinary climate, however, this measure has value here. In contrast, the percentage of students disciplined in a school is not by itself a good indicator of the strictness of a school's disciplinary climate because of the tendency of this measure to increase with the level of misbehavior in a school. Table 5.11 shows the results of a regression of the log of the ratio of students disciplined to students who have misbehaved on the school and student characteristics used in chapter 4 (scaled as described in the text there).

Apparently, only a few structural characteristics of a school or its student body have even a weak effect on this measure of disciplinary strictness. Clearly, however, Catholic schools tend to punish a high proportion of students compared with the level of misbehavior these schools have. Schools in the western part of the country punish relatively few students compared to the number who misbehave. Schools with a high percentage of students from farm and blue-collar backgrounds make greater use of sanctions, while schools with students from high-income families and schools with a high percentage of female students use punishment less, compared with the level of misbehavior.

Table 5.11.--Regression coefficients for a school-level measure of the ratio of sophomores who have been disciplined to sophomores who have misbehaved, regressed on selected school, student body academic environment, and sophomore student body family background characteristics: Spring 1980 1/

Independent variables	Dependent variable	
	Discipline ratio	
	Coefficient	t-value
Intercept	0.16	0.5
Region:		
New England	0.15	3.0
Middle Atlantic	0.025	0.6
South Atlantic	0.069	1.8
East South Central	0.13	2.7
East North Central	0.078	2.1
West South Central	0.044	1.2
West North Central	0.11	2.7
Mountain	-0.10	-2.1
Type of community:		
Suburban	0.0065	0.3
Urban	-0.012	-0.3
Type of school:		
Private	-0.063	-1.3
Catholic	0.17	4.4
School enrollment	-0.000048	-1.0
School enrollment**2	6.86	0.4
Student-staff ratio	-0.016	-0.6
Tenure of staff	-0.00065	-1.4
Percent minority	0.00043	0.3
Percent minority**2	3.13 E-07	0.0
Percent female	-0.0021	-2.8
Average homework	0.0046	0.7
Average early educational expectations	-0.059	-1.9
Percent academic program	0.005	0.8
Average verbal score	0.0032	0.1
Average math score	-0.0061	-0.6
Average family income	-0.0000062	-1.8
Average father's education ..	0.036	1.9
Percent professional fathers	0.015	0.1
Percent blue collar fathers .	0.21	2.1
Percent farm fathers	0.26	2.3
Percent father present	0.12	0.9
Percent mother present	0.036	0.2
Percent parents do not know ...	0.11	1.0
Percent parents do not monitor	-0.18	-1.2
R^2	.17	
Dependent variable statistics: Mean (Std. dev.)	0.52 (0.23)	

NOTE: Variables are defined in appendix A. Table entries were calculated using school weights. The number of cases used in the calculations differs slightly from the total number of schools (1,015) due to item nonresponse. T-values have been corrected for item nonresponse as described in the technical note to chapter 1. Appendix A indicates which independent variables were rescaled for regression analysis.

1/ Coefficients were estimated using generalized least squares.

5.2 The Distribution of Rule Enforcement by School Characteristics

As noted above, the High School and Beyond dataset contains additional information about the strictness of the disciplinary climate of high schools. Both school administrators and sample sophomores were asked whether five specific rules of conduct were enforced. The rules about which we have collected information do not directly pertain to the available measures of misbehavior but, in some cases, they are related. The requirement that a student carry a hall pass functions to keep students in the classroom when they belong there--and so should reduce class-cutting, if it is effective. Likewise, the requirement that students are responsible to the school for property damage should suppress vandalism. And, since school vandalism is a way that a student can get into trouble with the law, a school that raises the cost of vandalism might reduce the probability that its students are ever arrested. In general, however, the relationship between enforcement of rules and behavior is probably indirect, that is, rule enforcement indicates the strictness of the school's disciplinary climate.

There is substantial variation in the proportion of schools enforcing each of the five rules of conduct about which we have information. Virtually all schools (97.2 percent) say that they hold students responsible for property damage. The next most frequently enforced rule is "no smoking," which 87.2 percent of the sample high schools say is enforced in their school. Almost as many (84.1 percent) of the high schools require their students to carry hall passes. Slightly over half (53.9 percent) of the schools say that they enforce dress codes, while a minority of schools (39.2 percent) say that they close their school grounds during lunch hours.

5.2.1 Distribution of Rule Enforcement by Type of Community

Not surprisingly, the proportion of schools enforcing these rules differs according to important school attributes. If high schools are categorized by the type of community in which they are located, We find a great deal of heterogeneity, as can be seen in table 5.12. Urban schools have the highest rate of enforcement of dress codes and no-smoking rules and the lowest rate of enforcement of the closing of school grounds during lunch time. Suburban schools, in contrast, have the highest rate of enforcement of the closing of school grounds during lunch time and the lowest rate of enforcement of dress codes and no-smoking rules. Urban schools are least likely to require hall passes. In other words, urban schools enforce rules involving student movement the least and rules involving student decorum the most, according to the school administrators. Schools in all three types of communities have similar policies regarding property damage, which is not surprising since very few schools do not enforce a rule of this type.

5.2.2 Distribution of Rule Enforcement by Type of School

As one can see from table 5.13, other private schools are the least likely to close school grounds at lunch, while Catholic schools and public schools have similar policies. The great majority of public schools require the use of hall passes. Approximately three out of five Catholic schools also require them, while only 37 percent of other private schools enforce this rule. The three types of schools also differ substantially in their policy regarding dress codes. Almost all Catholic schools enforce them, 70 percent of other private schools do the same, and a slight majority of public schools also have rules regarding student dress. The schools have a much stronger consensus on the enforcement of no-smoking rules. Fully 98 percent of the

Table 5.12.--Percent of schools for which school administrator reports the indicated rule is enforced, by type of community: Spring 1980

Rule	Type of community		
	Urban	Suburban	Rural
Sample size	242	476	269
School grounds closed at lunch	28.19	44.98	36.21
Students responsible for property damage.	95.70	94.48	98.94
Hall passes required	69.53	75.54	76.52
"No Smoking" rules	93.35	86.45	90.03
Student dress rules	66.18	54.43	56.83

NOTE: Variables are defined in appendix A. Table entries were calculated using school weights.

Table 5.13.--Percent of schools for which school adminstrator reports the indicated rule is enforced, by type of school: Spring 1980

Rule	Type of school		
	Public	Catholic	Other 1/ private
Sample size	869	83	36
School grounds closed at lunch	40.26	43.37	23.07
Students responsible for property damage	96.45	95.16	100.00
Hall passes required	83.89	59.41	36.86
"No Smoking" rules	88.50	97.96	86.40
Student dress rules	50.91	99.58	70.39

NOTE: Variables are defined in appendix A. Table entries were calculated using school weights.

1/ Because of the small school sample size, the heterogeneity of the schools, and the high nonresponse rate for schools in this sector, the estimates for other private schools are not nearly as accurate or as interpretable as those for public or Catholic schools.

Catholic schools enforce this rule, while 89 percent of the public schools and 86 percent of the other private schools follow the same policy.

5.2.3 Distribution of Rule Enforcement by Region

There is also significant regional variation in the enforcement of student rules. Table 5.14 presents the complete picture of this geographic variation, but some general patterns can be noted here. Schools in the Western part of the country, the region with the highest rates of misbehavior, tend to enforce rules less than those in other parts of the country. In three of five cases--the closing of school grounds at lunch, the holding of students responsible for property damage, and the use of dress codes--the high schools located in Mountain states are least likely of the nine regions to enforce rules, while in a fourth--the use of hall passes--the Pacific schools have the lowest percentage. The central part of the country, which generally has the best student attendance record, also has the highest rate of rule enforcement. The West North Central schools have the highest rate of enforcement for the closing of school grounds at lunch and for no-smoking rules, while the West South Central region has the highest percentage of schools enforcing rules holding students responsible for property damage and requiring dress codes. The high schools of the East North Central states are most likely to enforce the requirement that hall passes be carried by students.

5.2.4 Distribution of Rule Enforcement by School Enrollment

The relationship between school enrollment and enforcement of rules is displayed in table 5.15. Large schools are more likely to enforce the two rules that govern student movement: they more frequently require hall passes and are more likely to close school grounds at lunchtime, though the latter pattern is less pronounced. Large schools are also less likely to require dress codes, but this is probably due to the fact that Catholic and other

Table 5.14.--Percent of schools for which school administrator reports the indicated rule is enforced, by region: Spring 1980

Rule	Region								
	New England	Middle Atlantic	South Atlantic	East South Central	West South Central	East North Central	West North Central	Mountain	Pacific
Sample size	52	158	148	51	104	199	77	53	146
School grounds closed at lunch	28.06	42.44	29.09	44.65	40.57	37.12	55.91	23.17	27.57
Students responsible for property damage	99.78	95.21	99.40	94.79	99.90	99.37	94.89	87.77	95.54
Hall passes required	69.24	81.72	78.64	66.32	72.94	87.54	82.45	74.35	50.55
No smoking rules	88.08	95.99	83.32	68.65	87.06	96.63	97.30	96.33	79.21
Student dress rules	42.42	45.60	63.28	64.96	82.24	56.14	50.22	38.96	53.34

NOTE: Variables are defined in appendix A. Table entries were calculated using school weights.

Table 5.15.--Percent of schools for which the school administrator reports the indicated rule is enforced, by school enrollment: Spring 1980

Rule	School enrollment						
	0-249	250-499	500-749	750-1,499	1,500-2,249	2,250-2,999	3,000 +
Sample size	75	96	100	303	227	97	29
School grounds closed at lunch ...	37.64	30.35	33.33	48.08	42.73	38.63	49.22
Students responsible for property damage	96.00	96.74	98.40	98.13	98.33	95.36	95.80
Hall passes required	56.65	76.83	84.63	86.24	92.63	95.13	94.61
"No Smoking" rules	97.05	86.48	83.13	88.03	85.23	91.67	91.67
Student dress rules	59.24	60.34	66.07	54.52	48.69	53.24	33.04

NOTE: Variables are defined in appendix A. Table entries were calculated using school weights.

private schools, which more frequently have dress codes than public schools, are smaller on the average.

5.2.5 Other Characteristics of Schools that Enforce Rules

We also investigated the relationship between rule enforcement and a number of other characteristics of the school and the student body. Schools that required hall passes had an average of 15.0 percent nonwhite students, as compared with 11.4 percent for those that did not. Schools that enforced no-smoking rules had 13.5 percent non-white students as compared with 19.6 percent for those that did not. Schools that enforced dress codes had 16.6 percent nonwhite as compared with 10.8 percent for those that did not.

Since enforcement of school rules varied somewhat according to the size of the school, and since the average sizes of schools in many of the categories vary substantially, the rates were recomputed after including a control for school size.[1] The introduction of school enrollment however, caused few changes in the orderings previously discussed. Below 250 students, Catholic schools are more likely to require hall passes; above that size, the public schools lead. Catholic and public schools alternately have higher rates of closing school grounds during lunch as the size of the school is increased. The ordering of schools by type of community is not much affected by the introduction of control for school size.

The use of school enrollment as a control does affect the relationship between percent nonwhite in the school and the enforcement of rules, however. In schools with more than 1,500 students, those with a higher percentage of minority students are less likely to say they enforce dress codes; at smaller sizes, schools with a larger minority population are more likely to enforce these rules. In schools with fewer than 350 students, those that enforce no-smoking rules have smaller percentages of nonwhites than those that do. For all large schools, however, those that enforce no-smoking rules have lower proportions of white and other nonblack, non-Hispanic students than schools that do not enforce these rules.

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[1] Schools were classified into the seven size intervals used in table 5.4 as well as by school type, region and type of community. In order to examine the relationship between school enrollment and the proportion of non-white students, we calculated the percent minority for schools that did not enforce each rule for each size category. Because of their bulk, these tables were not presented, though the main findings are reported.

Lastly, the distribution of schools according to the number of rules that are enforced was examined. Only 0.16 percent of the schools enforce no rules, 3.30 percent enforce one, 10.12 percent enforce two, 31.82 percent enforce three, 37.15 percent enforce four, and 17.46 percent enforce five rules. These percentages are more readily interepreted if we compare them with the distribution that would be expected if a school's enforcement of any one rule was independent of its policy with respect to the other four. If this condition of independence existed, then we would obtain the following distribution: 0.02 percent would enforce no rules, 0.94 percent would enforce one, 9.93 percent would enforce two, 34 percent would enforce three, 40.7 percent would enforce four, and 14.4 percent would enforce five rules.[1] By comparing this hypothetical distribution to the actual one, we can see that schools are more likely to say that they enforce none, one, or two than we would expect by chance, and they are more likely to say that they enforce all five than we would expect by chance. Thus, there is more tendency for schools to be located at the two extremes of the distribution than we would expect by chance, but the effect is modest in size.

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[1] These figures were obtained by combining the five marginal probabilities listed at the beginning of this section in all ways that would give the indicated number of rules enforced. For example, if p_1, p_2, p_3, p_4 and p_5 were the estimated probabilities, then $\sum_{i=1}^{5} (1 - p_i)$ gives the probability of enforcing no rules $\sum_{j=1}^{5} \prod_{i \neq j} p_j(1 - p_i)$ gives the probability of enforcing one rule and so forth.

5.3 Distribution of Student Body Misbehavior by School Administrators' Reports of Rule Enforcement

Having shown that there is a reasonable amount of variation in school policy concerning rule enforcement, we turn to the question of whether there is any relationship between rule enforcement in a school and student misbehavior.

5.3.1 Distribution of Misbehavior by the Number of Rules Enforced

Looking at the mean levels of misbehavior in schools according to the number of rules enforced in that school we see a clear pattern: as the number of rules enforced increases, the rate of misbehavior decreases. Table 5.16 shows that schools that enforce five rules have 16 percentage points fewer sophomores and 7 percentage points fewer seniors who say they cut class than schools that enforce only one rule. The enforcement of five rules is associated with a 30 percent reduction in sophomore absenteeism and a 42 percent reduction in tardiness as compared with schools that enforce one rule. The comparable reduction in senior rates of absenteeism and tardiness are 9 percent and 33 percent respectively. Neither sophomore nor senior rates of not doing assigned homework or being in trouble with the law are signficantly related to the number of rules enforced in the schools. The results demonstrate that the level of attendance shows the most responsiveness to the strictness of a school's disciplinary climate. Trouble with legal authorities for adolescents generally comes from activities that take place outside of school, and it is perhaps not surprising that it has no relationship with the enforcement of rules. The doing of homework is fundamentally an educational

Table 5.16.--Means of school-level measures of selected types of misbehavior, by educational cohort and school administrator's report of the number of rules enforced: Spring 1980

Educational cohort and type of misbehavior	Number of rules enforced					
	0	1	2	3	4	5
Sophomores:						
Sample size	3	18	94	312	363	184
Average days absent	6.36	4.08	3.14	2.76	2.85	2.85
Average days late .	5.05	3.85	4.42	2.18	2.32	2.20
Percent who cut class	31.09	38.10	35.97	24.08	23.81	22.22
Percent who don't do assigned homework	4.08	2.17	4.78	5.39	3.94	5.94
Percent who have been in serious trouble with the law	23.52	7.39	7.39	5.97	5.01	5.71
Seniors:						
Sample size	3	23	94	307	358	180
Average days absent	8.72	3.65	3.98	3.35	3.34	3.31
Average days late .	4.26	4.82	4.51	3.04	2.98	3.22
Percent who cut class	46.36	45.54	45.46	40.09	38.51	38.52
Percent who don't do assigned homework	7.73	1.41	3.66	5.33	5.17	4.96
Percent who have been in serious trouble with the law	5.43	4.09	5.13	4.29	3.71	5.24

NOTE: Variables are defined in appendix A. Table entries were calculated using school weights.

matter between teacher and student. Its borderline status between academic and disciplinary affairs may explain its lack of a relationship with school rules.

The zero-order relationships between rule enforcement and misbehavior, presented in table 5.16, have the same difficulties of interpretation that have been discussed in other contexts in this report. First, the relationship may exist because schools that enforce rules may enroll students with a lower propensity to misbehave. Without adequate controls these results cannot inform us about the size of the direct relationship between rule enforcement and student behavior, that is, the relationship when other important characteristics of the school and the student body are held constant. Second, the interpretation is clouded because enforcement can be a response to as well as a determinant of student behavior. This complication was discussed in the first section of this chapter.

However, in most cases, the decisions to enforce rules of conduct in the sample schools were probably not made recently. If the student body has had time to respond to school policy, then one might be able to learn about the efficacy of the enforcement of these rules by imposing sufficient controls for the characteristics of schools and their student bodies in a statistical analysis.

Accordingly, adjusted mean levels of misbehavior were generated for schools grouped according to the number of rules each enforces, and these results are presented in table 5.17. The quantities in table 5.17 show the mean misbehavior scores for schools as a function of the number of rules enforced, while fixing other significant characteristics of the school and the student body at their mean values for the entire school sample. The following characteristics of schools and their student bodies were used as covariates:

Table 5.17.--Adjusted means of school-level measures of selected types of misbehavior, by educational cohort and school administrator's report of the number of rules enforced: Spring 1980 1/

Educational cohort and type of misbehavior	Number of rules enforced					
	0	1	2	3	4	5
Sophomores:						
Sample size	3	18	94	312	363	184
Average days absent	—	2.30	2.60	2.91	2.85	2.91
Average days late .	—	1.69	2.79	2.45	2.42	2.39
Percent who cut class	—	35.44	33.20	30.55	28.92	27.97
Percent who don't do assigned homework	—	4.67	5.03	4.84	3.74	4.01
Percent who have been in serious trouble with the law	—	6.11	4.39	5.72	5.11	5.12
Seniors:						
Sample size	3	23	94	307	358	180
Average days absent	—	3.01	3.41	3.42	3.37	3.38
Average days late .	—	2.28	2.35	3.25	3.26	3.42
Percent who cut class	—	38.88	45.47	44.56	42.26	43.27
Percent who don't do assigned homework	—	1.21	3.38	4.30	3.80	4.43
Percent who have been in serious trouble with the law	—	4.27	3.03	3.95	3.83	4.77

NOTE: Variables are defined in appendix A. Table entries were calculated using school weights.

1/ Administrators were asked to indicate whether each of five rules of conduct was enforced in their schools. An analysis of covariance was then performed on the schools, using the number of rules enforced as the classification variable , and the following school and student body academic environment variables as covariates: school enrollment, school enrollment**2, type of school, type of community, region, student-staff ratio, tenure of staff, percent minority, percent female, average math score, average verbal score, and average early educational expectations. In addition, the following sophomore or senior student body family background variables were also controlled for: average family income, average father's education, percent professional fathers, percent blue collar fathers, percent farm fathers, percent father present, percent mother present, percent parents do not know, and percent parents do not monitor. ("Percent" family background variables were entered as proportions.) See appendix A for descriptions of these variables. The entries in the cells are least square means, which give the expected value for the quantity if all schools had the mean value for each of the covariates in the model.

the geographic region of the school; whether it was located in an urban, suburban, or rural community; whether the school was public, Catholic, or other private; the school enrollment and the square of the school enrollment; the log of the ratio of students to staff; the percent of minority students; the percent female students; the average amount of homework done by sample sophomores whose high school grades have been at least B or better; the average number of years in the previous four that sample sophomores planned to go on to college; the average verbal and mathematical scores of sophomores on the High School and Beyond tests; the percentage of sample sophomores in an academic curriculum; and the average value for sophomores or seniors as appropriate for each of the following characteristics: average family income, proportion of fathers in managerial or professional jobs, proportion of fathers in blue-collar occupations, proportion of fathers in farm occupations, average father's education, proportion of students with fathers or male guardians living in the household, the proportion of students with mothers or female guardians, the proportion who say that parents do not almost always know where the student is and what he or she is doing, and the proportion who say that neither parent keeps close track of how well the student is doing in school.[1]

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[1] We argued in chapter 4 that senior test scores, early educational expectations and participation in an academic program were not appropriate controls for the analysis of misbehavior. In this chapter, the sophomore values were used to compute adjusted rates for both cohorts. Because the sophomore test scores are not as good an estimate of the average ability of seniors as they are of the average ability of sophomores, one would expect them to have less of an effect on senior rates. Since controls tend to reduce the unadjusted effects and correlations, we expected senior results to show larger effects than they would otherwise. The results of chapter 4 suggest that the magnitude of the difference is likely to be small, however. Furthermore, the results of the current chapter show that, despite the less-than-adequate controls, effects of rule enforcement on senior rates are smaller than effects on sophomore rates. This pattern would only be accentuated if better controls were available for seniors.

Despite the addition of controls, the number of rules enforced is clearly associated with the percentage of sophomores who cut class. But the size of the difference, which was 16 percentage points, is reduced to 7.5 points. For other measures the adjusted relationship between misbehavior and rule enforcement is not as clear, mainly because the conduct of students in schools that enforce only one rule is surprisingly good. This group of schools constitutes less than 4 percent of the sample, however. Ignoring these schools for the moment, we can see a modest relationship between the number of rules enforced and the level of tardiness and the refusal to do homework. No relationship is apparent for the other two measures of sophomore misbehavior. In brief, the results suggest only a modest link between the strictness of the disciplinary climate and sophomore behavior. Reexamining the unadjusted means presented in Table 5.16, we can see that they also suggest that sophomore behavior is more sensitive to the enforcement of rules than is senior behavior. The bulk of the much stronger relationship found among sophomores can be accounted for by other characteristics of the school and student body, which are not directly related to the strictness of the disciplinary climate of the school.

5.3.2 Distribution of Misbehavior by Whether Specific Rules are Enforced

As noted above, at least four of the five rules under discussion are not direct deterrents of the activities that we have self-reports about. We expected an association between rule enforcement and misbehavior because schools that enforce these rules might be stricter in other ways also. Which rules are the best indicators of a strict climate? To find out, the level of misbehavior was compared for schools that enforce each specific rule and those that do not. Table 5.18 displays the results for sophomores and table 5.19 shows senior results.

Table 5.18.--Means of school-level measures of selected types of misbehavior reported by sophomores, by school administrator's report of whether or not the indicated rule is enforced: Spring 1980

Rule		Sample size	Type of misbehavior				
			Average days absent	Average days late	Percent who cut class	Percent who don't do assigned homework	Percent who have been in serious trouble with the law
School grounds closed at lunch	Yes	378	2.83	2.22	22.46	4.88	5.36
	No	584	2.94	2.71	27.05	4.73	6.06
Students responsible for property damage	Yes	940	2.85	2.49	25.27	4.76	5.81
	No	27	4.36	3.24	25.79	6.12	5.31
Hall passes required	Yes	824	2.89	2.27	25.03	4.99	5.61
	No	149	2.91	3.29	26.01	4.11	6.24
"No smoking" rules	Yes	850	2.90	2.52	24.51	4.76	5.69
	No	120	2.77	2.43	30.44	5.36	6.35
Student dress rules	Yes	522	2.75	2.26	22.70	4.97	5.24
	No	445	3.10	2.87	28.87	4.56	6.53

NOTE: Variables are defined in appendix A. Table entries were calculated using school weights.

Table 5.19.--Means of school-level measures of selected types of misbehavior reported by seniors, by school administrator's report of whether or not the indicated rule is enforced: Spring 1980

Rule		Sample size	Type of misbehavior				
			Average days absent	Average days late	Percent who cut class	Percent who don't do assigned homework	Percent who have been in serious trouble with the law
School grounds closed at lunch	Yes	375	3.43	3.18	38.69	5.00	4.29
	No	579	3.42	3.32	40.77	4.84	4.36
Students responsible for property damage	Yes	931	3.41	3.24	39.86	4.92	4.39
	No	27	3.97	3.91	41.69	5.22	2.75
Hall passes required	Yes	809	3.41	3.04	40.42	5.38	4.36
	No	155	3.47	3.93	38.60	3.45	4.25
"No smoking" rules	Yes	837	3.40	3.24	39.84	4.98	4.35
	No	124	3.45	3.26	42.79	4.70	4.55
Student dress rules	Yes	512	3.20	3.05	37.21	4.89	4.25
	No	446	3.72	3.54	43.65	4.92	4.45

NOTE: Variables are defined in appendix A. Table entries were calculated using school weights.

The results concerning the number of rules enforced almost guarantee a positive association between the enforcement of a specific rule and good behavior. The findings of table 5.18 and 5.19 are not a surprise. In nineteen of the twenty-five comparisons, sophomore misbehavior rates are lower when the rule is enforced. The exceptions are spread uniformly across the five rows. The refusal to do assigned homework has the weakest relationship with the enforcement of school rules. The other four measures respond more consistently to rule enforcement. Rates of tardiness show the sharpest differences. Table 5.19 contains a similar pattern. In eighteen of the twenty-five comparisons, the rate of senior misbehavior is lower when the rule is enforced. Of the different kinds of misbehavior, senior rates of not doing homework, are least strongly related to rule enforcement, while senior rates of tardiness exhibit the strongest relationship.

We also computed adjusted rates of misbehavior in the manner described earlier. These results are displayed in tables 5.20 and 5.21. When controls are applied, the closing of school grounds is most consistently related to lower rates of misbehavior by sophomores, and six of the seven large differences are in the expected direction. But the adjusted differences are not strongly related to the enforcement of specific rules. Furthermore, the adjusted rates for seniors, shown in table 5.21, reveal no discernible pattern.

The attempt to learn more about the effects of a strict disciplinary climate by analyzing the response to enforcement of specific rules of conduct failed because these rules are not specific deterrents of the forms of misbehavior that we can measure. Without information on corresponding student behavior, the reports on rule enforcement are best considered indicators of a school's disciplinary climate, and the number of rules a school enforces is a

Table 5.20.--Adjusted means of school-level measures of selected types of misbehavior reported by sophomores, by school administrator's report of whether or not the indicated rule is enforced: Spring 1980 1/

Rule		Sample size	Type of misbehavior: Average days absent	Average days late	Percent who cut class	Percent who don't do assigned homework	Percent who have been in serious trouble with the law
School grounds closed at lunch	Yes	378	2.39* 2/	2.21	2.66*	3.92*	4.78
	No	584	2.56	2.33	2.99	4.81	5.11
Students responsible for property damage	Yes	940	2.66	2.37	2.63	4.74	5.29
	No	27	2.29	2.17	3.01	3.99	4.60
Hall passes required	Yes	824	2.62*	2.28	2.81	3.74*	5.07
	No	149	2.33	2.27	2.84	4.99	4.82
"No smoking" rules	Yes	850	2.58	2.38	2.90	4.19	4.75
	No	120	2.37	2.16	2.74	4.54	5.13
Student dress rules	Yes	522	2.49	2.17*	2.70*	4.66	4.85
	No	445	2.46	2.38	2.94	4.08	5.04

NOTE: Variables are defined in appendix A. Table entries were calculated using school weights.

1/ Administrators were asked to indicate whether each of five rules of conduct was enforced in their schools. An analysis of covariance was then performed on the schools using whether a particular rule was enforced as the classification variable , and the following school and student body academic environment variables as covariates: school enrollment, school enrollment**2, type of school, type of community, region, student-staff ratio, tenure of staff, percent minority, percent female, average math score, average verbal score, and average early educational expectations. In addition, the following sophomore student body family background variables were also controlled for: average family income, average father's education, percent professional fathers, percent blue collar fathers, percent farm fathers, percent father present, percent mother present, percent parents do not know, percent parents do not monitor. ("Percent" family background variables were entered as proportions.) See appendix A for descriptions of these variables. The entries in the cells are least squares means, which give the expected value for the quantity if all schools had the mean value for each of the covariates in the model.

2/ An asterisk (*) indicates that the difference is large enough to reject the hypothesis that the quantities being compared have the magnitude at the .05 level. Care should be taken in relying on such tests, however, when so many comparisons are being made, and when the sample is not a simple random sample.

Table 5.21.--Adjusted means of school-level measures of selected types of misbehavior reported by seniors, by school administrator's report of whether or not the indicated rule is enforced: Spring 1980 1/

Rule		Sample size	Type of misbehavior				
			Average days absent	Average days late	Percent who cut class	Percent who don't do assigned homework	Percent who have been in serious trouble with the law
School grounds closed at lunch	Yes	375	3.70	3.31* 2/	42.94	4.67	4.78
	No	579	3.66	2.99	43.29	4.32	5.11
Students responsible for property damage	Yes	931	3.44	3.23	42.77	3.13*	5.29
	No	27	3.93	3.08	43.47	5.85	4.60
Hall passes required	Yes	809	3.60	3.16	42.94	5.68*	5.07
	No	155	3.76	3.14	43.30	3.30	4.82
"No smoking" rules	Yes	837	3.68	3.26	44.05	4.51	4.75
	No	124	3.69	3.04	42.18	4.47	5.13
Student dress rules	Yes	512	3.67	3.07	42.20	4.15	4.85
	No	446	3.70	3.23	44.03	4.83	5.04

NOTE: Variables are defined in appendix A. Table entries were calculated using school weights.

1/ Administrators were asked to indicate whether each of five rules of conduct was enforced in their schools. An analysis of covariance was then performed on the schools using whether a particular rule was enforced as the classification variable , and the following school and student body academic environment variables as covariates: school enrollment, school enrollment**2, type of school, type of community, region, student-staff ratio, tenure of staff, percent minority, percent female, average math score, average verbal score, and average early educational expectations. In addition, the following senior student body family background variables were also controlled for: average family income, average father's education, percent professional fathers, percent blue collar fathers, percent farm fathers, percent father present, percent mother present, percent parents do not know, percent parents do not monitor. ("Percent" family background variables were entered as proportions.) See appendix A for descriptions of these variables. The entries in the cells are least squares means, which give the expected value for the quantity if all schools had the mean value for each of the covariates in the model.

2/ An asterisk (*) indicates that the difference is large enough to reject the hypothesis that the quantities being compared have the same magnitude at the .05 level. Care should be taken in relying on such tests, however, when so many comparisons are being made, and when the sample is not a simple random sample.

more accurate indicator than information about the enforcement of any specific rule.

To summarize, the results show that students misbehave less in schools that enforce rules of conduct. Generally speaking, the greater the number of rules enforced, the better the conduct of the students. Sophomores are more responsive to this aspect of the disciplinary climate than are seniors. This might occur if those who are less familiar with an organization and those who are younger show greater respect for organizational authority than those who are more familiar with an organization. Certainly this hypothesis appears to be true in a general way: despite the dropout of many of the worst offenders, seniors have poorer attendance records than sophomores. The results of this section suggest that sophomores not only have better attendance records than seniors, but they also are more responsive to a stricter disciplinary climate than seniors.

5.4 Determinants of Sophomores' Perceptions of Rule Enforcement

In the High School and Beyond Study, sample sophomores were asked to indicate whether they felt that the aforementioned rules of conduct were enforced in their school. Sophomores in a school often agree with the answers of their school administrators, as a study of table 5.22 will show. However, the level of consensus is limited. Furthermore, the degree of consensus on enforcement of rules is by no means uniform from one rule to the next. When administrators say they enforce no-smoking rules, an average of 80 percent of the sample sophomores in their schools agree. But an average of only 45 percent of sophomores agree with administrators who affirm that school grounds are closed at lunch. Sophomores in schools that do not enforce a specific rule of conduct, according to the school administrators, are in most cases less likely to indicate that it is enforced in their school. Again, the level

Table 5.22.--Means of school-level measures of sophomores' perceptions of rule enforcement by school administrator's report of whether or not the rule is enforced: Spring 1980

Sophomore's perception of rule	Schools for which administrator reports rule is enforced		Schools for which administrator reports rule is not enforced	
	Sample size	Mean	Sample size	Mean
Percent who think school grounds closed at lunch	378	44.95	584	15.94
Percent who think students are responsible for property damage	940	65.50	27	60.65
Percent who think hall passes are required	824	78.75	149	20.36
Percent who think "no smoking" rules are enforced	850	79.83	120	37.13
Percent who think student dress rules are enforced	522	70.80	445	31.28

NOTE: Variables are defined in appendix A. Table entries were calculated using school weights.

of consensus varies. The difference between the average percentage of sophomores who felt that a rule was enforced in schools divided according to their administrator's answer to this question ranges from 5 percentage points for the rule that students are responsible for property damage to 58 percentage points for the requirement of hall passes.

The fact that students do not unanimously agree with the statements of policy regarding rule enforcement made by the school administrators allows us to use the student reports as a check on the de facto policy of the school. Unfortunately, the ambiguity of the English language precludes a precise interpretation of the meaning of the responses of either students or administrators. It is likely that administrators reported on the official school policy, that is, on the intention of the school regarding enforcement of each of the five rules. To a certain extent, the student assessments are a gauge of awareness of school policy. But students are probably also reporting their perception of the likelihood that a student who committed an activity proscribed by one of these rules would actually be disciplined. Clearly, awareness of official policy and assessment of de facto policy are linked since the exercise of a policy is the surest method for its communication.

Schools in which more sophomores agree that a rule is enforced could have a stricter disciplinary climate than other schools, but it is hard to determine how closely perceptions of rule enforcement are related to the strictness of the school climate. As noted before, students' assessments of rule enforcement are probably related to their guess of the likelihood that someone who committed a proscribed act would be punished. But students' judgments might also be a function of the number of times they have seen a rule enforced, which depends on the number of times the rule is violated. If students in a strict school rarely misbehave, sophomores from that school might find a question about enforcement of a rule perplexing. If they reason that the rule is rarely invoked, they may say it is not enforced. If they reason that a violation would almost certainly cause the rule to be invoked, they might respond that the rule is enforced. While this ambiguity may slightly reduce the interpretability of the sophomore reports, they still are useful for the purposes of this analysis.

5.4.1 Perception of Rule Enforcement in Schools Where the Administrator Reports a Rule is Enforced

Because of the usefulness of sophomore reports as a check on the strictness with which official policy is applied, we investigated the characteristics of schools that are associated with the likelihood that a sophomore says that a rule is enforced, given that the school administrator has declared that it is enforced as dependent variables in a regression analysis. We used the percentage of the sample sophomores in the school who stated that each of the five rules asked about was enforced as dependent variables in a regression analysis. The regressors are the same as in chapter 4 (and scaled in the same way), with the addition of the log of the ratio of the number of sample sophomores who were disciplined to the number who misbehaved (defined earlier in this chapter). Each regression used only schools in which the administrator said that the rule was enforced. The coefficients are shown in table 5.23. In order to avoid repetition, the fact that we are examining only schools that say that a particular rule is enforced is not continually repeated throughout the subsection, but the reader should keep the special nature of this sample in mind.

The pattern of association is not uniform for all rules. The size of the school enrollement is a powerful predictor of sophomore evaluation for some rules but is insignificant for others. To illustrate, students in moderate-sized high schools are significantly more likely to assert that hall

Table 5.23.--Regression coefficients for school-level measures of sophomores' perceptions of rule enforcement, for schools where the school administrator says these rules are enforced, regressed on selected school, student body academic environment, and sophomore student body family background characteristics, and a measure of school discipline: Spring 1980 1/

Independent variables	Dependent variable 2/: Percent who think school grounds are closed at lunch		Percent who think students are responsible for damage		Percent who think hall passes are required		Percent who think "no smoking" rules are enforced		Percent who think student dress rules are enforced	
	Coefficient	t-value	Coefficient	t-value	Coefficient	t-value	Coefficient	t-value	Coefficient	t-value
Intercept	2.71	1.0	1.92	1.2	7.92	3.56	-0.91	-0.3	5.95	2.4
Region:										
New England	-2.45	-5.4	0.96	3.6	0.17	0.45	-0.73	-1.7	-2.14	-5.3
Middle Atlantic	-1.11	-3.2	0.17	0.8	0.79	2.72	0.69	2.0	-0.19	-0.6
South Atlantic	-2.15	-6.5	-0.034	-0.2	1.00	3.69	-1.17	-3.6	-0.31	-1.1
East South Central	-2.21	-5.2	0.52	2.1	1.25	3.58	-0.99	-2.4	1.56	4.1
East North Central	0.082	0.3	0.58	3.1	1.24	4.67	0.50	1.6	-0.20	-0.7
West South Central	1.21	3.6	-0.25	-1.3	0.73	2.66	-0.38	-1.1	1.37	4.6
West North Central	0.036	0.1	0.51	2.4	0.85	2.88	0.0032	0.01	-0.44	-1.3
Mountain	1.46	3.4	1.38	5.5	-0.21	-0.60	-0.41	-1.0	-0.18	-0.5
Type of community:										
Suburban	-0.17	-0.9	0.087	0.7	-0.21	-1.30	-0.56	-2.9	-0.40	-2.2
Urban	-0.028	-0.1	-0.12	-0.7	-1.39	-5.67	-0.34	-1.2	-0.26	-1.0
Type of school:										
Private 3/	1.02	2.4	0.52	2.1	-1.62	-4.66	1.32	3.2	0.75	2.0
Catholic	1.08	3.1	0.56	2.7	-0.44	-1.55	1.26	3.7	2.39	7.6
School enrollment	0.0014	3.3	-0.000037	-0.2	0.0021	5.97	-0.0006	-1.4	-0.00014	-0.4
School enrollment**2	-3.78 E-07	-2.7	-2.81 E-08	-0.3	-4.92 E-07	-4.23	2.00 E-07	1.4	-1.16 E-07	-0.9
Student-staff ratio	0.046	0.2	0.63	4.6	-1.12	5.86	-0.40	-1.8	-0.40	-1.9
Tenure of staff	-0.014	-3.4	-0.0069	-3.0	-0.0028	-0.85	0.0044	1.1	-0.014	-3.8
Percent minority	-0.029	-2.4	-0.0059	-0.8	-0.0078	-0.79	0.0013	0.1	0.018	1.6
Percent minority**2	0.00017	1.3	-0.000040	-0.5	0.00010	0.97	0.00011	0.8	-0.00018	-1.5
Percent female	0.018	2.8	-0.0084	-2.2	0.016	3.05	0.015	2.3	0.0062	1.1
Average homework	0.037	0.6	-0.045	-1.3	0.30	6.24	-0.046	-0.8	0.012	0.2
Average early educational expectations	0.12	0.4	-0.048	-0.3	-0.72	-3.20	-0.42	-1.6	-0.43	-1.8
Percent academic program	0.24	4.3	0.12	3.8	0.012	0.27	0.031	0.6	0.23	4.6
Average verbal score	0.21	1.2	-0.0067	-0.1	0.43	2.85	0.21	1.2	0.99	6.0
Average math score	-0.10	-1.2	0.0048	0.1	-0.076	-1.09	-0.021	-0.2	-0.17	-2.2
Average family income	-0.000016	-0.5	0.000023	1.4	-0.000032	-1.32	0.0000069	0.2	-0.000057	-2.2
Average father's education	-0.065	-0.4	0.084	0.9	-0.0032	-0.02	0.28	1.8	-0.10	-0.7
Percent professional fathers	-1.86	-1.5	-0.44	-0.6	-0.0062	-0.01	-2.27	-1.8	-1.37	-1.2
Percent blue collar fathers	0.65	0.7	1.80	3.4	1.63	2.21	-0.30	-0.3	-1.20	-1.5
Percent farm fathers	2.54	2.5	1.06	1.8	-2.34	-2.82	2.07	2.1	-3.99	-4.4
Percent father present	-0.41	-0.4	0.39	0.6	-1.66	-1.87	4.09	3.9	2.81	2.9
Percent mother present	1.78	1.1	0.61	0.6	1.65	1.20	2.8	1.7	0.31	0.2
Percent parents do not know	1.34	1.4	1.09	2.0	-1.70	-2.19	-1.64	-1.8	-2.46	-2.9
Percent parents do not monitor	-2.25	-1.7	-0.50	-0.6	-1.20	-1.07	-1.18	-0.9	0.73	0.6
Discipline ratio	-0.029	-0.1	0.41	2.2	-0.38	-1.46	0.54	1.6	1.78	6.3
R^2	.29		.29		.36		.30		.48	
Dependent variable statistics: Mean (standard deviation)	26.87 (25.94)		65.33 (15.43)		64.11 (33.59)		75.03 (26.94)		54.01 (32.06)	

NOTE: Variables are defined in appendix A. Table entries were calculated using school weights. The number of cases used in the calculations differs slightly from the total number of schools where each rule is enforced (378, 940, 824, 850, and 522 respectively) due to item nonresponse. T-values have been corrected for item nonresponse as described in the technical note to chapter 1. Appendix A indicates which independent variables were rescaled for regression analysis.

1/ Coefficients were estimated using generalized least squares.

2/ Regressions were carried out on the percent of sophomores who thought a rule was enforced, divided by ten. To compute expected percents, the results of a calculation should be multiplied by ten. T-values are unaffected by the rescaling.

3/ Because of the small school sample size, the heterogeneity of the schools, and the high nonresponse rate for schools in this sector, the estimates for other private schools are not nearly as accurate or as interpretable as those for public or Catholic schools.

passes are enforced than are students in small schools. The difference in sophomore rates of agreement on the enforcement of this rule between a school with 1,000 students and one with 250 is 11 percentage points. Between a school with 2,000 students and one with 250, the difference is 17 points. Sophomores in large schools are also more likely to declare that school grounds are closed at lunch. The difference in rates between a school of 250 students on the one hand and first 1,000 and then 2,000 on the other is 7 and 9.6 percentage points, respectively. Size is a less important predictor of sophomore evaluations in other cases.

In most cases, sophomores in private and Catholic schools are more likely to report that rules are enforced than public school sophomores. For Catholic schools, the effect is significant for all rules except the enforcement of hall passes, the one rule for which the coefficient of Catholic schools is negative. It is strongest for the enforcement of dress codes, next for holding students responsible for property damage, and third for enforcing no-smoking rules. To show the strength of these effects, I computed the predicted increase in the percentage of sophomores stating that each rule is enforced in Catholic schools compared with public schools. For the five rules used here (ordered in the following way: the closing of school grounds, responsibility for property damage, the use of hall passes, no smoking allowed, and the use of dress codes), the predicted changes in percentages are: +11 percent, +6 percent, -4 percent, +13 percent, and +24 percent. As the reader can see, the last change--involving the enforcement of dress codes--is by far the largest. We can also extract from table 5.23 the conclusion that, on the average, 10 percent more sophomores in private high schools than in public high schools are likely to say that the rule closing school grounds at lunch is enforced, 5 percent more say that the school enforces the rule regarding responsibility for property damage, 13 percent more say this for no-smoking rules, and 8 percent for the enforcement of dress codes.

Urban schools differ from others in the lower rates of their sophomores who feel that hall passes are required. Suburban schools differ from rural ones in that enforcement of no-smoking rules and of dress codes is more lax.

The log of the ratio of students to staff is sometimes a good predictor of enforcement also. Schools with fewer staff to students are stricter in holding students responsible for property damage but less strict in enforcing rules regarding hall passes than are schools with more staff to students. If the faculty has been with the school for a long time, rules are enforced more leniently. Surprisingly, schools with a more stable faculty have a lower percentage of sophomores reporting that school grounds are closed, that students are held liable for property damage, and that dress codes are enforced. The effect of staff tenure is statistically significant for these three rules, but its magnitude is small. In the first of these cases, where the effect is largest, a 10-point increase in the percent of teachers who have worked at the school for more than a decade predicts only a 1 percent reduction in the percentage of sophomores who say that the salient rules are enforced.

The ratio of students who have been disciplined to students who have misbehaved has a surprisingly weak relationship to sophomores' perceptions of rule enforcement, except in the case of dress codes and, to a lesser extent, of schools' holding students responsible for damage. For both rules, a higher ratio predicts a higher level of rule perception. The average amount of homework done in the school by sophomores who get good grades is a statistically significant predictor of the perception of the requirement of hall passes but not of the perception of other rules.

The regressions show significant variation in the enforcement of school rules according to the geographic region in which the school is located. They demonstrate as well the lack of homogeneity in the results of these regressions. A region that has significantly higher rates of enforcement for one rule than most other regions may have significantly lower rates for another rule. No region has consistently more or less strict enforcement of these rules.

Other important findings will be reported briefly. A larger percentage of nonwhite students is associated with less enforcement of the closing of school grounds, but none of the other measures of rule perception. Schools with a large percentage of female students or with a large percentage of students in academic programs are usually seen by sophomores to enforce rules more strictly than are other schools.

The results of these regressions are difficult to summarize because the pattern of coefficients is different for each rule. Generally speaking, however, sophomores are more likely to say that school rules are enforced in Catholic and other private schools, in schools with a high percentage of academically oriented students, in schools with a high percentage of female students, and in rural schools. School enrollment apparently matters only for those rules that control behavior that is a potential problem mainly in large schools, such as the physical movement of students. The log of the ratio of sophomores disciplined to sophomores who have misbehaved is a weaker predictor of the enforcement of rules governing movement than it is of other rules. The relationships between rule enforcement and school enrollment and between type of school and school enrollment provide empirical hints that sophomores are using several guidelines when answering these questions. The relationship between school enrollment and enforcement may be caused by a tendency to judge effectiveness by the frequency with which rules are seen to be enforced. The relationship between type of school and rule enforcement may also reflect the student's sense of the probability that a rule violation will be punished.

How well does rule enforcement, as judged by the sophomores, predict misbehavior in high school? Correlations between the five types of self-reported sophomore misbehavior, measured at the school level, and the percentage of sophomore students declaring that a rule is enforced in schools where the school administrator has affirmed that it is enforced are presented in table 5.24.

In most instances, the correlations are negative and statistically significant. The table shows that the enforcement of the two rules governing personal deportment show the strongest relationship with conduct, while the sophomores' evaluation of whether school grounds are closed at lunch is least important. School scores for the level of class attendance by students are more closely tied to the students' evaluations than are scores for failure to do homework or trouble with the law, though the former activity has a significant negative relationship with enforcement of all five rules. Having been in trouble with the law is linked more with the enforcement of no-smoking rules and dress codes than it is with the control of property damage or the control of student movement.

Partial correlations between the enforcement of rules and school levels of misbehavior were produced, controlling for the set of school and student characteristics that were used in analyzing the qualities of schools and their student bodies that predict sophomore evaluations. The results are presented in table 5.25. They also show a relationship between strict enforcement of rules and lower levels of misbehavior. In a majority of the cells, the correlations are in the expected direction, and large enough to be described as significant at standard levels. The best predictors of misbehavior are still the two rules that pertain to what we have called

Table 5.24.--Correlations between school-level measures of sophomores' perceptions of role enforcement and school-level measures of selected types of misbehavior reported by sophomores, for schools where the school administrator reports that the indicated rule is enforced: Spring 1980

	Sample 1/ size	Average days absent	Average days late	Percent who cut class	Percent who don't do assigned homework	Percent who have been in serious trouble with the law
Percent who think school grounds are closed at lunch	378	-0.06	-0.07	-0.10* 2/	-0.06	0.04
Percent who think students responsible for property damage	940	-0.17***	-0.15***	-0.25***	-0.09**	-0.01
Percent who think hall passes are required ..	824	-0.05	-0.15***	-0.04	0.02	-0.03
Percent who think "No smoking" rules are enforced	850	-0.14***	-0.14***	-0.20***	-0.06	-0.03
Percent who think student dress rules are enforced	522	-0.36***	-0.30***	-0.48***	-0.14**	-0.17***

NOTE: Variables are defined in appendix A. Table entries were calculated using school weights.

1/ Only schools in which the administrator said that the school rule indicated was enforced were included in the computations for each row. The number of sample schools used in the calculation of each coefficient differs slightly from the total number of such schools due to item nonresponse.

2/ Asterisks are used to indicate the probability that the sample correlation would be larger in absolute value than the quantity obtained under the hypothesis that the true partial correlation is zero: *** indicates p <.001, ** indicates p <.01, * indicates p <.05

Table 5.25.--Partial correlation coefficients between school-level measures of sophomores' perceptions of rule enforcement and school-level measures of selected types of misbehavior reported by sophomores, for schools where the school administrator reports that the indicated rule is enforced: Spring 1980 [1]

Rule	Sample[2] size	Average days absent	Average days late	Percent who cut class	Percent who don't do assigned homework	Percent who have been in serious trouble with the law
Percent who think school grounds are closed at lunch	378	-0.05	-0.08	-0.10	-0.19**	0.04
Percent who think students are responsible for property damage	940	0.00	-0.11**	-0.08*	-0.08*	0.13***
Percent who think hall passes are required	824	-0.07*[3]	-0.10***	-0.04	-0.11	-0.03
Percent who think "no smoking" rules are enforced	850	-0.09*	-0.14***	-0.12**	-0.00	0.06
Percent who think student dress rules are enforced	522	-0.20***	-0.21***	-0.16**	-0.11*	-0.19***

NOTE: Variables are defined in appendix A. Table entries were calculated using school weights.

[1] In computing the partial correlations, the following school and student body academic environment variables were controlled for: school enrollment, school enrollment**2, type of school, type of community, region, student-staff ratio, tenure of staff, percent minority, percent female, average verbal score, average math score, and average early educational expectations. In addition, the following sophomore student body family background variables were also controlled for: average family income, average father's education, percent professional fathers, percent blue collar fathers, percent farm fathers, percent father present, percent mother present, percent parents do not know, percent parents do not monitor. ("Percent" family background characteristics were entered as proportions. Correlation coefficients are unaffected by the rescaling.) See appendix A for descriptions of these variables.

[2] Only schools in which the administrator said that the school rule was enforced were included in the computations for each row. The number of sample schools used in the calculation of each coefficient differs slightly from the total number of such schools due to item nonresponse.

[3] Asterisks are used to indicate the probability that the sample correlation would be larger in absolute value than the quantity obtained under the hypothesis that the true partial correlation is zero: *** indicates p <.001, ** indicates p <.01, * indicates p < .05.

personal deportment. The rules governing student movement are perhaps the weakest predictors. Both attendance in class and the doing of homework are sensitive to the strictness of the disciplinary climate in the school. The reader may not be surprised to see that of the measures of misbehavior, the percentage of sophomores who have been in trouble with the law, which is not restricted to behavior within the school, is the most poorly predicted by school rule enforcement. In fact, the percentage of students in trouble with the law is positively associated with school enforcement of student responsibility for property damage.

What is the relationship between sophomore evaluation of rule enforcement and the behavior of seniors in the school? Table 5.26 shows that seniors are also responsive to the strictness of the disciplinary climate, but not as much as sophomores are. Most of the correlations between sophomores' perceptions and senior behavior are negative, and many of these are significant. But they are often smaller than the correlation between sophomore perceptions and sophomore behavior. Furthermore, while the correlations involving attendance measures show the expected pattern, the relationships between rule enforcement and the other two rates are more often positive then negative: more enforcement is associated with higher percentages of students who don't do assigned homework and who have been in trouble with the law.

We cannot at the present time explain why a few of these correlations are positive for both sophomores and seniors. But the answer might be related to the general problems involved in understanding the relationship between rule enforcement and misbehavior discussed at the start of this chapter. Social control can be both a response to and a deterrent of behavior considered offensive by an organization. Even if the rules about which we have information were implemented for the specific purpose of controlling the types of behavior that we can measure from student self-reports, we could not

Table 5.26.--Partial correlation coefficients between school-level measures of sophomores' perceptions of rule enforcement and school-level measures of selected types of misbehavior reported by seniors for schools where the school administrator reports the indicated rule is enforced: Spring 1980 [1]

	Sample[2] size	Average days absent	Average days late	Percent who cut class	Percent who don't do assigned homework	Percent who have been in serious trouble with the law
Percent who think school grounds are closed at lunch	375	0.02	-0.09	0.01	0.18**	0.11
Percent who think students are responsible for property damage	931	0.02	-0.11**	0.01	0.03	0.10**
Percent who think hall passes are required	809	0.08*[3]	-0.02	-0.09*	0.12**	0.01
Percent who think "no smoking" rules are enforced	837	-0.03	-0.16***	-0.14***	-0.02	-0.12**
Percent who think dress rules are enforced	512	-0.07	-0.22***	-0.16**	0.17**	-0.08

NOTE: Variables are defined in appendix A. Table entries were calculated using school weights.

[1] In computing the partial correlations, the following school and student body academic environment variables were controlled for: school enrollment, school enrollment**2, type of school, type of community, region, student-staff ratio, tenure of staff, percent minority, percent female, average verbal score, average math score, and average early educational expectations. In addition, the following senior student body family background variables were also controlled for: average family income, average father's education, percent professional fathers, percent blue collar fathers, percent farm fathers, percent father present, percent mother present, percent parents do not know, percent parents do not monitor. ("Percent" family background characteristics were entered as proportions. Correlation coefficients are unaffected by the rescaling.) See appendix A for descriptions of these variables.

[2] Only schools in which the administrator said that the school rule indicated was enforced were included in the computations for each row. The number of sample schools used in the calculation of each coefficient differs slightly from the total number of such schools due to item nonresponse.

[3] Asterisks are used to indicate the probability that the sample correlation would be larger in absolute value than the quantity obtained under the hypothesis that the true partial correlation is zero. *** indicates p <.001, ** indicates p <.01, * indicates p <.05.

use correlations between enforcement and misbehavior as exact measures of the effectiveness of school policies. In the absence of a satisfactorily specified model that can be used to estimate the reciprocal relationships, measures of association will capture both effects. When effects have opposite signs, as do these reciprocal effects, the measure of association will be weakened. There is not sufficient information to construct simultaneous equations models to estimate the separate effects for each rule and so we have had to rely on partial correlations.

The consequences of this situation can most easily be seen in the case of the average percentage of students who have been in serious trouble with the law. Because being in trouble with the law, and the activities precipitating it, often occur outside of school hours and away from the school, this activity might have a stronger effect on rule enforcement in the school than rule enforcement has on it. Because the first effect would be positive, we would expect that the correlation between rule enforcement and this activity would be more positive than the effect of rule enforcement on legal difficulties. The correlation would actually be greater than zero if the deterrent effect of rule enforcement were sufficiently weak.

The correlations between the percentage of students in trouble with the law and the two rules governing personal deportment are the only ones even to reach moderately negative levels. Perhaps high schools do not let the potential for misbehavior influence their enforcement of the former rules as much. It is also possible that schools that enforce the latter rules take more care in keeping bad students out of their schools than could be measured with these controls.

The same interpretation can be used for the generally larger correlations between no-smoking rules and dress codes and the other measures of conduct. In the case of attendance at class, the earlier argument about reciprocal causation is compelling. One would expect that a school having problems keeping students in class would change its policies concerning movement in the hallways more than it would change its enforcement of dress codes, for instance. Therefore, the enforcement of rules governing student movement and student responsibility for damage could be as effective a set of deterrents as the control of student dress or personal habits, despite the lower partial correlations between the former set of rules and self-reported misbehavior.

We again wish to stress that the rules measured in High School and Beyond do not necessarily act as specific deterrents for the behaviors that were measured. The correlation of rule enforcement with behavior is due in part to the association between the rules asked about and school policies that are direct deterrents of the misbehaviors measured. The relationship may also arise from the association of rule enforcement with school characteristics that would otherwise motivate students to conform to certain standards.

For all the reasons discussed above, we suggest that the importance of the results presented in tables 5.25 and 5.26 may lie not so much in the specific pattern of correlations as in the tendency of the correlations to be negative. They suggest that strict disciplinary climates do deter student misbehavior. Schools that enforce rules more diligently have less disorder, even when important characteristics of the schools and their students are controlled for.

5.5 Determinants of the Perception of Fairness and Effectiveness of Discipline

The final topic considered in this chapter concerns the perceptions of students in high schools about the fairness and effectiveness of disciplinary procedures at their schools. Students were asked to evaluate these aspects of the disciplinary climate of their schools on a four-point scale ranging from excellent through good and fair to poor. We examined the determinants of the proportion of sophomores who said that the effectiveness or fairness of discipline in their schools was fair or poor in table 5.27.

The model coefficients have a number of interesting properties. They indicate that Catholic and other private sophomores are much more likely to believe that discipline in their schools is effective than are students in public schools. Sophomores in schools that punish many sophomores relative to the number who misbehave are also more likely to judge the effectiveness of discipline in their school to be excellent or good. The perception of students varies by region: sophomores in the New England, Middle-Atlantic, and Pacific states are more critical of their schools' disciplinary policies. The minority composition of the student population is also an important predictor of student perception. As we have seen in chapter 4, schools with roughly equal numbers of white students and students of other races were judged more harshly than those with a more homogeneous student body. The highest percentages of sophomores saying that their schools have ineffective disciplinary procedures are found in schools with 45 percent minority students. As the percentage of minority students increases or decreases, the proportion of students criticizing the effectiveness of disciplinary procedures falls. The percentage of the student body in an academic program is associated with this measure of the school disciplinary climate as well: students are more satisfied with the effectiveness of disciplinary procedures in schools with higher proportions of sophomores in academic programs.

Table 5.27 also shows that perceptions of fairness of discipline do not always parallel perceptions of disciplinary effectiveness. Catholic students are more likely than other students to feel that discipline in their school is fair, but the effect is less strong than that on evaluations of the strictness of discipline. The same is true for other private students.

Table 5.27.--**Regression coefficients for school-level measures of sophomores' perceptions of the indicated school characteristics, regressed on selected school, student body academic environment, and sophomore student body family background characteristics and a measure of school discipline: Spring 1980 1/**

Independent variables	Dependent variables 2/							
	Percent who think school reputation is poor		Percent who think teacher interest is low		Percent who think effectiveness of discipline is low		Percent who think fairness of discipline is low	
	Coefficient	t-value	Coefficient	t-value	Coefficient	t-value	Coefficient	t-value
Intercept	0.95	4.6	0.16	0.9	0.75	4.0	0.53	2.9
Region:								
New England	0.061	1.8	0.033	1.1	0.0086	0.3	0.016	0.5
Middle Atlantic	0.027	1.0	0.069	2.9	0.015	0.6	0.077	3.8
South Atlantic	-0.059	-2.4	-0.0021	-0.1	-0.087	-3.8	-0.011	-0.5
East North Central	0.0054	0.2	0.060	2.1	-0.048	-1.6	0.048	1.7
West North Central	-0.029	-1.2	0.028	1.3	-0.016	-0.7	0.057	2.7
East South Central	-0.084	-3.3	-0.043	-1.9	-0.15	-6.6	0.00059	0.0
West South Central	-0.038	-1.4	0.0055	0.2	-0.043	-1.7	0.043	1.8
Mountain	-0.072	-2.2	-0.014	-0.5	-0.14	-4.5	0.0051	0.2
Type of community:								
Suburban	-0.008	-0.6	-0.037	-2.7	-0.026	-1.9	-0.025	-1.9
Urban	-0.021	-0.4	-0.022	-1.1	-0.0036	-0.2	0.010	0.5
Type of school:								
Private 3/	-0.05	-1.7	-0.099	-3.5	-0.17	-5.7	-0.030	-1.1
Catholic	-0.12	-4.4	-0.14	-6.0	-0.23	-9.6	-0.075	-3.2
School enrollment	-0.000081	-2.4	0.000043	1.5	-0.000035	-1.1	0.00004	1.4
School enrollment**2	1.80 E-08	1.7	-1.01 E-08	-1.1	6.33 E-09	0.6	-1.14 E-08	-1.2
Student-staff ratio	-0.029	-1.6	-0.00026	-0.0	-0.044	-2.7	-0.033	-2.1
Tenure of staff	-0.00022	-0.7	0.00021	0.8	0.00027	1.0	0.000077	0.3
Percent minority	0.0015	1.6	0.0017	2.1	0.0026	3.0	0.0022	2.7
Percent minority**2	-0.0000055	-0.6	-0.00002	-2.3	-0.000028	-3.1	-0.000020	-2.3
Percent female	-0.00054	-1.1	-0.00036	-0.8	-0.00046	-1.0	0.000095	0.2
Average homework	-0.0042	-1.0	0.000033	0.0	-0.00062	-0.2	0.0033	0.8
Average early educational expectations	-0.020	-1.0	-0.0016	-0.1	0.058	3.0	-0.039	-2.1
Percent academic program	-0.0090	-2.1	-0.017	-4.6	-0.022	-5.6	-0.0098	-2.6
Average verbal score	-0.014	-1.0	-0.013	-1.0	-0.0095	-0.7	-0.010	-0.8
Average math score	-0.017	-2.7	-0.016	-2.8	-0.012	-2.1	-0.0070	-1.2
Average family income	0.0000057	2.5	0.0000067	3.4	0.0000072	3.5	0.000011	5.4
Average father's education	-0.030	-2.4	-0.0024	-0.2	-0.046	-1.7	-0.023	-2.1
Percent professional fathers	0.0032	0.0	-0.20	-2.4	-0.028	-0.3	-0.051	-0.6
Percent blue collar fathers	0.015	0.2	-0.041	-0.7	-0.083	-1.3	-0.017	-0.3
Percent farm fathers	-0.1	-1.4	0.050	0.8	0.036	0.5	0.18	2.6
Percent fathers present	0.089	1.1	0.32	4.4	0.11	1.5	0.19	2.7
Percent mother present	-0.0035	-0.0	0.21	1.8	0.19	1.6	0.13	1.2
Percent parents do not know	0.26	3.7	0.055	0.9	0.13	1.9	0.12	1.9
Percent parents do not monitor	0.075	0.7	-0.091	-1.0	0.036	0.4	-0.11	-1.2
Discipline ratio	-0.024	-1.0	0.017	0.8	-0.085	-3.9	0.013	0.6
R^2	.32		.40		.40		.26	
Dependent variable statistics: Mean (Std. dev.)	33.96 (20.26)		49.44 (18.98)		55.67 (16.56)		41.45 (18.74)	

NOTE: Variables are defined in appendix A. Table entries were calculated using school weights. The number of cases used in the calculations differs slightly from the total number of schools (1,015) due to item nonresponse. T-values have been corrected for item nonresponse as described in the technical note to chapter 1. Appendix A indicates which independent variables were rescaled for regression analysis.

1/ Coefficients were estimated using generalized least squares.

2/ Regressions were carried out on the percent of sophomores who thought the school was "fair" or "poor" on a given characteristic divided by 100. To compute expected percents, the results of a calculation should be multiplied by 100. T-values are unaffected by the rescaling.

3/ Because of the small school sample size, the heterogeneity of the schools, and the high nonresponse rate for schools in this sector, the estimates for other private schools are not nearly as accurate or as interpretable as those for public or Catholic schools.

Furthermore, the log of ratio of the number of students who have been disciplined to the number who have misbehaved has essentially no relationship to the judgments of students about fairness. Sophomores in the Middle Atlantic and East North Central regions are more likely than students in other regions to feel that disciplinary procedures are unfair in their schools. High early educational expectations are associated with a better evaluation by sophomores.

Three findings do parallel the results on the perception of the effectiveness of rules. First, schools with a mixed racial composition are judged more harshly on the fairness of discipline, just as they are judged to have less effective disciplinary procedures. Second, schools with high income students are judged more harshly than other schools on both measures. And third, when more sophomores are enrolled in an academic curriculum, more sophomores have a favorable impression of the fairness of discipline.

The relationship between sophomore and senior self-reports and sophomore perceptions of the quality of disciplinary procedures can be seen in tables 5.28 and 5.29. The quantities in the cells are the partial correlation coefficients between the percentage of sophomores who judge school procedures to be "poor" and the percentage of sophomores or seniors who have done each of the indicated activities. As one might expect, higher levels of misbehavior are linked with more negative evaluations of the effectiveness of discipline in the school. The relationship between levels of misbehavior and the perceived fairness of discipline is weak, however.

While levels of misbehavior have no net relationship with the perception of the fairness of school discipline, the perceived enforcement of specific school rules shows a strong link with fairness. Table 5.30 shows a weak relationship between the enforcement of rules and the perceived effectiveness of discipline, but a much stronger relationship between rule

Table 5.28.--Partial correlation coefficients between school-level measures of sophomores' perceptions of selected school characteristics and school-level measures of selected types of misbehavior reported by sophomores: Spring 1980 1/

	Average days absent	Average days late	Percent who cut class	Percent who don't do assigned homework	Percent who have been in serious trouble with the law
Percent who think school reputation is poor 2/..................	0.12** 3/	0.15***	0.15**	0.11***	0.03
Percent who think teacher interest is low 2/....................	-0.04	0.01	0.05	0.03	-0.10**
Percent who think effectiveness of discipline is low 2/	0.08*	0.15***	0.25***	0.05	-0.06
Percent who think fairness of discipline is low 2/	0.01	0.05	0.05	-0.02	-0.01

NOTE: Variables are defined in appendix A. Table entries were calculated using school weights. The number of sample schools used in each calculation differs slightly from the total number of sample schools (1,015) due to item nonresponse.

1/ In computing the partial correlations, the following school and student body academic environment variables were controlled for: school enrollment, school enrollment**2, type of school, type of community, region, student-staff ratio, tenure of staff, percent minority, percent female, average verbal score, average math score, and average early educational expectations. In addition, the following sophomore student body family background variables were also controlled for: average family income, average father's education, percent professional fathers, percent blue collar fathers, percent farm fathers, percent father present, percent mother present, percent parents do not know, percent parents do not monitor. ("Percent" family background characteristics were entered as proportions. Correlation coefficients are unaffected by the rescaling.) See appendix A for descriptions of these variables.

2/ Sophomore perceptions are measured as the percent who rated the school as "poor" on a given characteristic.

3/ Asterisks are used to indicate the probability that the sample correlation would be larger in absolute value than the quantity obtained under the hypothesis that the true partial correlation is zero: *** indicates p <.001, ** indicates p <.01, * indicates p <.05.

Table 5.29.--Partial correlation coefficients between school-level measures of sophomores' perceptions of selected school characteristics and school-level measures of selected types of misbehavior reported by seniors: Spring 1980 1/

	Average days absent	Average days late	Percent who cut class	Percent who don't do assigned homework	Percent who have been in serious trouble with the law
Percent who think school reputation is poor 2/....................	0.07	0.03	0.14***	-0.06	-0.01
Percent who think teacher interest is low 2/	0.15*** 3/	0.02	0.11**	-0.05	-0.04
Percent who think effectiveness of discipline is low 2/	0.12**	0.09*	0.22***	0.00	0.08*
Percent who think fairness of discipline is low 2/	0.07	-0.02	-0.00	0.08*	0.08*

NOTE: Variables are defined in appendix A. Table entries were calculated using school weights. The number of sample schools used in each calculation differs slightly from the total number of sample schools (1,015) due to item nonresponse.

1/ In computing the partial correlations, the following school and student body academic environment variables were controlled for: school enrollment, school enrollment**2, type of school, type of community, region, student-staff ratio, tenure of staff, percent minority, percent female, average verbal score, average math score, and average early educational expectations. In addition, the following senior student body family background variables were also controlled for: average family income, average father's education, percent professional fathers, percent blue collar fathers, percent farm fathers, percent father present, percent mother present, percent parents do not know, percent parents do not monitor. ("Percent" family background characteristics were entered as proportions. Correlation coefficients are unaffected by the rescaling.) See appendix A for descriptions of these variables.

2/ Sophomore perceptions are measured as the percent who rated the school as "poor" on a given characteristic.

3/ Asterisks are used to indicate the probability that the sample correlation would be larger in absolute value than the quantity obtained under the hypothesis that the true partial correlation is zero: *** indicates p <.001, ** indicates p <.01, * indicates p <.05.

Table 5.30.--Partial correlation coefficients between school-level measures of sophomores' perceptions of selected school characteristics and school-level measures of sophomores' perceptions of which rules are enforced for schools where the school administrator reports the indicated rule is enforced: Spring 1980 1/

	Percent who think school grounds are closed at lunch	Percent who think students are responsible for property damage	Percent who think hall passes are required	Percent who think "No smoking" rules are enforced	Percent who think student dress rules are enforced
Sample size 2/	378	940	824	850	522
Percent who think school reputation is poor 3/	0.06	0.12***	0.04	0.07	-0.02
Percent who think teacher interest is low 3/	0.07	0.03	-0.04	0.08*	0.11*
Percent who think effectiveness of discipline is low 3/	0.08	-0.06	-0.04	-0.09*	-0.06
Percent who think discipline is low 3/	0.22*** 4/	0.12**	0.06	0.15***	0.17**

NOTE: Variables are defined in appendix A. Table entries were calculated using school weights.

1/ In computing the partial correlations, the following school and student body academic environment variables were controlled for: school enrollment, school enrollment**2, type of school, type of community, region, student-staff ratio, tenure of staff, percent minority, percent female, average verbal score, average math score, and average early educational expectations. In addition, the following sophomore or senior student body family background variables were also controlled for: average family income, average father's education, percent professional fathers, percent blue collar fathers, percent farm fathers, percent father present, percent mother present, percent parents do not know, percent parents do not monitor. ("Percent" family background characteristics were entered as proportions. Correlation coefficients are unaffected by the rescaling.) See appendix A for descriptions of these variables.

2/ Only schools in which the administrator said that the school rule indicated was enforced were included in the computation for each column. The number of sample schools used in the calculation of each coefficient differs slightly from the total number of such schools due to item nonresponse.

3/ Sophomore perceptions are measured as the percent who rate the school as "poor" on a given characteristic.

4/ Asterisks are used to indicate the probability that the sample correlation would be larger in absolute value than the quantity obtained under the hypothesis that the true partial correlation is zero: *** indicates p <.001, ** indicates p <.01, and * indicates p <.05.

enforcement and the fairness of discipline. In schools where rules are enforced, sophomores think that disciplinary procedures are unfair. The relationship is strongest when the correlation involves the closing of school grounds at lunch, and next strongest for the two rules involving student demeanor at school. The results suggest that the requiring of hall passes is the least objectionable policy from the perspective of students.

The interpretation of specific correlations is hazardous, however. Students are not judging the enforcement of these specific rules, but the disciplinary climate in general. The results are best understood in more general terms. It may be that students judge the effectiveness of a policy by comparing the goals of a policy to the conditions in the school. If the two conform, the students attribute the conditions to the policy, regardless of their true cause. If school authorities make the threat of punishment too explicit, or punish too frequently, students may feel that the disciplinary climate of the school is oppressive. They may react by judging the disciplinary policies of the school to be unfair.

This explanation would be consistent with the relationships found between student perceptions and the three types of measures used to understand the disciplinary climate of a school. Low rates of self-reported misbehavior are associated with high perceived effectiveness of discipline: the outcome conforms to the intentions of school policy. If these low rates come from widespread student motivation to conform that is not maintained by pervasive threats of punishment, they would imply low perceptions of unfairness. If they come from an effective but overbearing school policy, they would imply high perceptions of unfairness. The inability of a correlational analysis to distinguish between the two cases may explain the lack of a zero order correlation between self-reported misbehavior and perceptions of fairness.

The effects of the log of the ratio of disciplined students to students who have misbehaved on perceived fairness and effectiveness of discipline can be explained in the same way. This ratio is positively related to perceived effectiveness of discipline. The relationship between this ratio and perceived effectiveness of discipline is based primarily on the rates of misbehavior which vary inversely with this ratio. But the contrary effects of low misbehavior rates and high levels of punishment nullify each other, and so the ratio has no relationship with perceived fairness.

Finally, this hypothesis might explain the relationship between perceived rule enforcement and perceived fairness and effectiveness of disciplinary procedures. The judgments about enforcement of rules may be based primarily on the perception by students that students are often punished for violating these rules. According to our hypothesis, students who felt the threat of punishment too strongly would be more likely to judge the school's disciplinary procedures to be unfair. Their judgments about rule enforcement may have only a weak relationship with the level of misbehavior in the school, however. Since they judge effectiveness by comparing outcomes to intention, according to our hypothesis, and since the relationship between rule enforcement and the level of misbehavior may be weak, it would follow that the relationship between perceived enforcement of rules and perceived effectiveness of disciplinary procedures would also be weak. Further analysis will be needed, however, in order to understand better the relationship among student perceptions of school disciplinary policies, the enforcement of these policies, and the misbehavior of students.

5.6. Conclusion

In this chapter, we have investigated in detail the distribution of rule enforcement policies in schools and examined the relationship among school disciplinary policies, the level of misbehavior in the school, and the evaluation by the sophomores in High School and Beyond of some important aspects of the school climate. The results have shown that schools vary in their enforcement of school rules. In some cases, the variations are substantial. Catholic schools, for example, are much more likely than public or other private schools to enforce dress codes, while large schools are more likely than small schools to require hall passes. Schools in the western part of the country generally enforce fewer rules than their counterparts elsewhere. The enforcement of particular rules of conduct is not systematically related to most of the other classification variables used in this report, however.

The effects of school enforcement of disciplinary procedures are hard to analyze with cross-sectional data, since we cannot observe whether a policy changes the behavior of individuals over time, or whether changes in a school policy have any immediate effect. However, the data suggest that stricter policies are associated with lower levels of misbehavior. If one holds constant the level of misbehavior of sophomores in a school, the level of misbehavior of sample seniors usually is lower in schools where a higher proportion of sophomores report that they have in some way been disciplined.

Schools that enforce more rules have lower rates of misbehavior. Most of this relationship is mediated by other characteristics of the schools and their student bodies, however. When one controls for these characteristics, the relationship becomes weaker. This association exists for both sophomores and seniors, but is stronger for the former cohort. Even after the controls are applied, however, the negative association between rates of misbehavior for sophomores and the number of rules enforced by the school is still evident. No discernible relationship remains between rule enforcement and senior misbehavior when controls are applied.

Sophomores generally affirm the statements of school administrators concerning the enforcement of school rules, but their opinions on enforcement are not uniform. The statements of school administrators probably represent the "official" policy of the school, while the evaluations of the sophomores provide information about the de facto policy. If we limit our attention to schools in which the administrators have said that a particular rule of conduct is enforced in their school, we find that the percentage of sophomores who agree with this assessment varies by school in systematic, interpretable ways. Larger schools have higher percentages of sophomores who feel that rules governing the movement of students are enforced. Sophomores in private and Catholic schools are more likely than public school students to feel that a rule is enforced; sophomores in urban and suburban schools are less likely than rural students to feel this way. There are significant regional variations as well. Furthermore, the judgments of sophomores regarding rule enforcement are significantly associated with the levels of misbehavior in the school. Schools in which more sophomores think that rules are enforced have lower rates of misbehavior.

Schools also differ in the extent to which their sophomores feel that disciplinary procedures are fair and effective. Schools in which a higher proportion of the sophomores have been disciplined relative to the number who reported that they have misbehaved are judged by sophomores to have more effective discipline. But this ratio has no effect on sophomores' judgments about the fairness of discipline. Schools with more students in academic programs are judged more positively than other schools, while those with students from higher income families are judged more negatively. Students in racially homogeneous schools have more favorable opinions of discipline in their schools, when other important school and student characteristics are held constant. The ratings of school discipline are worst in schools with roughly equal numbers of white students and students of other races.

The judgments by sophomores of the effectiveness of discipline are linked to the levels of misbehavior of both sophomores and seniors. The level of misbehavior is not, however, associated with judgments of the fairness of discipline. In contrast, students feel that disciplinary procedures are more unfair in schools where a higher proportion of sample sophomores think that school rules are enforced. The enforcement of these rules is not, however, linked to students' general evaluation of the effectiveness of disciplinary policies in the school.

CHAPTER 6

CONCLUSION

Rather than summarizing the results, as has been done in the Summary of Major Findings, this conclusion will emphasize certain themes that have recurred throughout report. While schools are most often thought of as institutions that prepare students for careers through training and certification, it has long been recognized that schools also perform an important socializing function. Schools are the setting for the first extensive exposure to authority and discipline outside the home and the testing ground for a student's ability to adapt to the demands of impersonal control structures similar to those that may characterize much of his or her adult life. There is an obvious parallel between an individual's attachment to the labor force, measured as commitment to the status of worker and acceptance of the normative structure of the job, and commitment to the status of student and acceptance of the normative structure of the school.

The High School and Beyond Data show that many students have a weak attachment to the normative structure of the school. This alienation appears to originate in the family. Students from families that have been disrupted through the death or departure of a parent tend to misbehave more, both in and out of school. The data also suggest that the level of social control exerted by parents in the youth's family is an important determinant of later behavior. One of the strongest predictors of misbehavior is the academic orientation and academic performance of the student. We have not been able to investigate the development of this relationship between academic orientation and conduct. Poor academic prospects may cause students to resent school and motivate them to rebel against the authority of the school and its teachers.

Alternatively, students prone to misbehavior may see schoolwork as another demand they wish to rebuff. No doubt both factors are crucial components of the process of childhood and adolescent development. We have not been able to find strong effects of high school grades on levels of misbehavior, or of misbehavior in high school on grades. Predispositions in both areas are apparently already well established by the time that a student reaches high school. Continued misbehavior in high school does appear to depress educational expectations of sophomores, however, compared to their reports of their earlier expectations.

The results of this analysis have shown that schools vary in their levels of misbehavior, and that this variation cannot be explained by the measures of characteristics of the student body available in the High School and Beyond study. Catholic and other private schools apparently have lower levels of misbehavior than do public schools. The size of the school enrollment is not consistently related to misbehavior nor is the type of community within which the school is located. Regional variations in the level of misbehavior appear to be substantial, however. We have not been able to explain them fully in terms of the other information we have about high schools and their students.

Because only the first wave of the High School and Beyond data is currently available, an analysis of the effects of a strict school disciplinary climate on student behavior is difficult. The results do suggest, however, that enforcement of rules and greater use of punishment are related to lower levels of misbehavior and to a more widespread perception by students that disciplinary procedures in their school are effective. Determining the criteria used by students in deciding whether disciplinary procedures in their schools were fair was less successful. Apparently, however, there is a relationship between rule enforcement and a perception of unfairness: schools in which greater numbers of sophomores felt that specific rules of conduct were enforced were also schools in which many sophomores felt that disciplinary procedures were unfair. The results also showed that public school students were more likely than other students to be critical of the fairness of discipline as well. Sophomores in schools with higher income students were more critical of school discipline than sophomores in other schools. Sophomores in schools that had roughly equal numbers of white students and students of other races were more critical of school discipline than sophomores in racially homogeneous schools.

Disruptive behavior by high school students poses both a threat and a challenge to the school. By degrading the social climate of the school and calling into question the legitimacy of teacher authority, delinquency can impede the learning process for everyone. But if a high school can instill in students a respect for authority and social order and a habit of self-discipline, it may increase the likelihood that its graduates will lead productive and satisfying lives.

This goal may seem too ambitious. More modest but still challenging goals remain to be met. One is to gain control over the external behavior of youth in order to improve the climate for those who sincerely want to learn. The other is to establish an effective and fair disciplinary structure in the school in order to support student morale and give those who would otherwise withdraw from the school not only a chance to redirect their energy toward participation and the attainment of cognitive skills but also a greater ability to deal with externally imposed structure in their lives. Such a talent may prove even more valuable than academic knowledge in dealing with the demands thrust on every adult by present-day society. The High School and

Beyond data suggest that administrators may have the potential to exercise control over behavior with appropriately defined policies. We can offer no specific suggestions beyond those already implied in the findings we have presented. We hope, however, that there results will increase our understanding of misbehavior in schools and in this way contribute to solutions that will improve the effectiveness of the schools and enrich the educational experience of our students.

APPENDIX A

VARIABLE DEFINITIONS

Variables used in this report come from several sources: information about school characteristics which was used in the selection of the sample, the school questionnaire which was filled out by the school principal or other school administrator, and the student questionnaire and tests. Students were asked for perceptions of the school as a whole and for reports of their own behavior. Student reports can be used in analyses of students or can be aggregated within school. Student reports were used in both ways in this study. Three kinds of variables were aggregated from student reports: aggregated student perceptions, student body characteristics, and contextual variables.

Variables are listed in this appendix both by the analytic unit to which they refer (school or student) and by the source of the variable. The sections of this appendix are:

1. School Level--Global School Characteristics
2. School Level--School Characteristics
3. School Level--Aggregated Student Perceptions
4. School Level--Student Body Characteristics Aggregated from Student Reports
5. School Level--Contextual Variables Aggregated from Student Reports
6. Student Level--Individual Characteristics

Variables are listed alphabetically within section, by the labels used to identify them in the tables. This identifying phrase serves as the name of the variable for this report. In this appendix the variable name is followed by a keyword in parentheses. For variables taken from the school questionnaire, this keyword is the SPSS variable name which appears in the school file codebook (High School and Beyond, 1981). For variables from the student questionnaire, the keyword is the "variable identifier" as defined in the codebook for the student file (High School and Beyond, 1980).

This variable identification information is generally followed by a brief description of the item and any modifications made to it during analysis. In the case of items which are neither continuous nor dichotomous, the response alternatives are listed.

School Level

Global School Characteristics

SOURCE: Sample selection information

Region

Region in which school is located.

(a) Contingency tables use the following categories:

New England: Maine, Vermont, New Hampshire, Massachusetts, Connecticut, Rhode Island.

Middle Atlantic: New York, Pennsylvania, New Jersey, Delaware.

South Atlantic: Maryland, West Virginia, Virginia, North Carolina, South Carolina, Georgia, Florida.

East South Central: Kentucky, Tennessee, Alabama, Mississippi.

West South Central: Oklahoma, Arkansas, Louisiana, Texas.

East North Central: Ohio, Indiana, Michigan, Illinois, Wisconsin.

West North Central: North Dakota, South Dakota, Minnesota, Nebraska, Iowa, Kansas, Missouri.

Mountain: Montana, Wyoming, Idaho, Nevada, Utah, Colorado, Arizona, New Mexico.

Pacific: Washington, Oregon, California, Alaska, Hawaii.

(b) In regression analysis, dummy variables were created for these categories. "Pacific" serves as the reference category.

Type of community

Level of urbanization of community in which school is located.

(a) Contingency tables use the following categories:

Urban: Located in the central city of an SMSA.

Suburban: Located in an SMSA but outside of the central city.

Rural: Located outside of an SMSA.

(b) In regression analysis, dummy variables were created for these categories. "Rural" serves as the reference category.

Type of school

(a) Contingency tables use the following categories:

Catholic: Regular Catholic, black Catholic, and Cuban or Hispanic Catholic schools

Private: "Elite other private" and "other private" schools.

Public: Alternative, regular sample, Cuban-Hispanic public, and other Hispanic public schools.

(b) In regression analysis, dummy variables were created for these categories. "Public" serves as the reference category.

School Level

School Characteristics

SOURCE: School Questionnaire

Absenteeism (SB056A)
The degree to which absenteeism is a problem. Rating scale (and values): serious (1), moderate (2), minor (3), not at all (4).

Average daily attendance (SB008)
Coded as continuous variable.

Class cutting (SB056B)
The degree to which absenteeism is a problem. Rating scale: serious, moderate, minor, not at all.

Conflicts between students and teachers (SB056H)
The degree to which conflicts between students and teachers are a problem. Rating scale: serious, moderate, minor, not at all.

Hall passes required (SB054C)
Whether or not this rule is enforced.

"No smoking" rules (SB054D)
Whether or not such rules are enforced.

Number of rules enforced (SB054A-SB054E)
Sum of the number of the following rules which are enforced: school grounds closed at lunch, students held responsible for property damage, hall passes required, no smoking rules, student dress rules.

Percent black (SB0094S)
Percent of school enrollment reported to be black.
Coded as a continuous variable.

Percent female (SB041)
Percent of school enrollment reported to be female.
Coded as continuous variable.

Percent Hispanic (SB0093S)
Percent of school enrollment reported to be Hispanic.
Coded as a continuous variable.

Percent minority (SB0093S SB0094S)
Sum of the percent of the student enrollment reported in each of these minority groups: black and Hispanic.
Coded as a continuous variable.

Percent minority**2 (SB0093S SB0094S)
The square of "Percent minority."

Physical conflicts among students (SB056G)
The degree to which physical conflicts among students are a problem. Rating scale: serious, moderate, minor, not at all.

Rape or attempted rape (SB056L)
The degree to which rape or attempted rape is a problem. Rating scale: serious, moderate, minor, not at all.

Robbery or theft (SB056I)
The degree to which robbery or theft is a problem. Rating scale: serious, moderate, minor, not at all.

School enrollment (SB002A)
Total student membership of school on 1 October 1980.

(a) In regression analysis, original coding as a continuous variable was used.
(b) In contingency tables, the variable was recoded as indicated in table headings.

School enrollment**2 (SB002A)
The square of "School enrollment."

School grounds closed at lunch (SB054A)
Whether or not this rule is enforced.

Student dress rules (SB054E)
Whether or not such rules are enforced.

Student possession of weapons (SB056M)
The degree to which student possession of weapons is a problem. Rating scale, serious, moderate, minor, not at all.

Student use of drugs or alcohol (SB056K)
The degree to which student use of drugs or alcohol is a problem. Rating scale: serious, moderate, minor, not at all.

Student-staff ratio (SB002A SB039A-SB039L)
Log of the ratio of "School enrollment" to the number of school staff members. Coded as a continuous variable.

Students responsible for property damage (SB054B)
Whether or not this rule is enforced.

Tenure of staff (SB045)
Percent of teaching staff who have been at the school for ten years or more. Coded as a continuous variable.

Vandalism of school property (SB056J)
The degree to which vandalism of school property is a problem. Rating scale: serious, moderate, minor, not at all.

Verbal abuse of teachers (SB056N)
The degree to which verbal abuse of teachers is a problem. Rating scale: serious, moderate, minor, not at all.

School Level

Aggregated Student Perceptions

SOURCE: Student Questionnaire

NOTE: Variables are sometimes rescaled in an analysis. When this is done, the rescaling is specified in the text, tables, or both.

Percent who think effectiveness of discipline is low (BB053F)
In regression analysis, percent of sophomores who reported aspect of school is "fair" or "poor." In partial correlation analysis, the percent of sophomores who reported aspect of school is "poor." Rating scale: poor, fair, good, excellent.

Percent who think fairness of discipline is low (BB053G)
In regression analysis, percent of sophomores who reported aspect of school is "fair" or "poor." In partial correlation analysis, the percent of sophomores who reported aspect of school is "poor." Rating scale: poor, fair, good, excellent.

Percent who think hall passes are required (YB020C)
Percent of sophomores who reported that this rule is enforced. Rating scale: poor, fair, good, excellent.

Percent who think "no smoking" rules are enforced (YB020D)
Percent of sophomores who reported that this rule is enforced.

Percent who think school grounds are closed at lunch (YB020A)
Percent of sophomores who reported that this rule is enforced.

Percent who think school reputation is poor (BB053D)
In regression analysis, percent of sophomores who reported aspect of school is "fair" or "poor." In partial correlation analysis, the percent of sophomores who reported aspect of school is "poor."
Rating scale: poor, fair, good, excellent.

Percent who think students are responsible for property damage (YB020B)
Percent of sophomores who reported that this rule is enforced.

Percent who think student dress rules are enforced (YB020E)
Percent of sophomores who reported that this rule is enforced.

Percent who think students often cut class (YB019B)
Percent of sophomores who reported behavior "often" happens.
Rating scale: often happens, sometimes happens, rarely or never happens.

Percent who think students often disobey instructions (YB019D)
Percent of sophomores who reported behavior "often" happens.
Rating scale: often happens, sometimes happens, rarely or never happens.

Percent who think students often don't attend school (YB019A)
Percent of sophomores who reported behavior "often" happens.

Rating scale: often happens, sometimes happens, rarely or never happens.

Percent who think students often get into fights (YB019E)
Percent of sophomores who reported behavior "often" happens.
Rating scale: often happens, sometimes happens, rarely or never happens.

Percent who think students often talk back (YB019C)
Percent of sophomores who reported behavior "often" happens.
Rating scale: often happens, sometimes happens, rarely or never happens.

Percent who think students often threaten teachers (YB019F)
Percent of sophomores who reported behavior "often" happens.
Rating scale: often happens, sometimes happens, rarely or never happens.

Percent who think teacher interest is low (BB053E)
In regression analysis, percent of sophomores who reported aspect of school is "fair" or "poor." In partial correlation analysis, the percent of sophomores who reported this aspect of school is "poor."
Rating scale: poor, fair, good, excellent.

Percent who don't feel safe at school (BB059F)
Percent of sophomores or seniors who reported it is "true" that they don't feel safe in school.

School Level

Student Body Characteristics Aggregrated from Student Reports

SOURCE: Student Questionnaire and Tests

NOTE: For convenience, some clusters of the student body characteristic variables are refered to by general descriptive phrases in the table headings and text:

(a) "Student body family background characteristics" include Average family income, Average father's education, Percent professional fathers, Percent blue collar fathers, Percent farm fathers, Percent father present, Percent mother present, Percent parents do not know, Percent parents do not monitor.

(b) "Student body behaviors" include Average days late, Average days absent, Percent who don't do assigned homework, Percent who have been in serious trouble with the law, Percent who have been suspended or put on probation, and Percent who have had disciplinary problems.

(c) "Student body academic environment characteristics" include Average homework, Percent academic program, Average early educational expectations, Average verbal score, and Average math score.

Student body family background characteristics and student body behaviors are calculated separately for sophomores and seniors, whichever group is being analyzed. Student body academic environment characteristics, on the other hand, are calculated only once for each school, using information supplied by sophomores.

Variables are sometimes rescaled in an analysis. When this is done, the rescaling is specified in the text, tables, or both.

Average days absent (BB016)
The average number of days sophomores or seniors in a school reported being absent for reasons other than illness between the beginning of school and Christmas vacation, during the academic year 1979-1980.

Before calculating the average, each category was assigned the value of the midpoint of the category.

Average days late (BB017)
The average number days sophomores or seniors in a school reported being late between the beginning of school and Christmas vacation, during the academic year 1979-1980.

Before the average was calculated, each category was assigned the value of the midpoint of the category.

Average early educational expectations (YB072A YB072B BB068A BB068B)
The variable "Early educational expectations" is described in the "Student Level" section of this appendix.

"Average early educational expectations" is the mean of "Early educational expectations" for all sophomores in a school.

Average family income (BB101)
The average of the family income reported by sophomores or seniors in a school.

Before the average was calculated, each category was assigned the value of the midpoint of the category.

Average father's education (BB039)
The average education in years of the fathers of sophomores or seniors in a school.

Before the average was calculated, categories were assigned values as follows: "less than high school" was assigned the value 10, "high school graduation" was assigned the value 12, less than 2 years of vocational or college was assigned the value 13, 2 or more years of vocational or college was assigned the value 14, "finished college" was assigned the value 15, "Master's degree" was assigned the value 16, and degrees above a Master's degree were assigned the value 18.

Average homework (BB015)
The average hours per week spent on homework by sophomores who indicated that their average grades were mostly B's or better (BB007). Students who reported that no homework was assigned were excluded.

Average math score
The variable "Math score" is described in the "Student Level" section of this appendix. "Average math score" is the mean of "Math score" for all sophomores in a school.

Average verbal score
The variable "Verbal score" is described in the "Student Level" section of this appendix. "Average verbal score " is the mean of "Verbal score" for all sophomores in a school.

Discipline ratio (BB059B BB059D BB016 BB017 BB059E BB015)
The log of the ratio of sophomores in the sample who said (a) they had had discipline problems while in high school or (b) they had been put on probation or suspended, to the number of students who (a) had been absent for reasons other than illness for five or more days between the beginning of school and Christmas vacation in the academic year 1979-80, or (b) had been late to school for five or more days during this period, or (c) said they cut class "every once in a while," or (d) said only don't do assigned homework. The value 1 was added to this ratio before the log was taken.

Percent academic program (BB002)
Percent or proportion of sophomores in school who reported they were in an academic or college preparatory program.

In regression analysis, this variable was entered as a proportion multiplied by ten. To rescale the coefficient to a percent metric, multiply the coefficient by .1.

Percent blue collar fathers (BB038)
Percent or proportion of sophomores or seniors in a school with fathers in blue collar occupations. "Blue collar" occupations include: "craftsman," "laborer," "military," "operative," and "protective service."

In regression analyses, this variable was rescaled and entered as a proportion.

Percent disciplined (BB059B BB059D)
Percent of sophomores who reported either that they had had disciplinary problems while in high school or that they had been suspended or put on probation.

Percent expecting college (BB065)
Percent of sophomores who reported they expected to go to college for any length of time.

Percent farm fathers (BB038)
Percent or proportion of sophomores or seniors in a school with fathers in farm occupations. "Farm" occupations include: "farm" and "farm manager."

In regression analyses, this variable was rescaled and entered as a proportion.

Percent father present (BB036B BB036C)
Percent of sophomores or seniors in a school who reported that their father or other male guardian lives with them.

In regression analyses, this variable was rescaled and entered as a proportion.

Percent misbehaved (BB016 BB017 BB015 BB059E)
Percent of sophomores who were absent for reasons other than illness for five or more days between the beginning of school and Christmas vacation in the academic year 1979-1980, or had been late on at least five days during the same period, or don't do assigned homework, or cut class "every once in a while."

Percent mother present (BB036D BB036E)
Percent or proportion of sophomores or seniors in a school who reported that their mother or other female guardian lives with them.

In regression analyses, this variable was rescaled and entered as a proportion.

Percent parents do not know (BB046C)
Percent or proportion of sophomores or seniors in a school who reported that their parents do not "almost always know where I am and what I'm doing."

In regression analyses, this variable was rescaled and entered as a proportion.

Percent parents do not monitor (BB046A BB046B)
Percent or proportion of sophomores or seniors in a school who reported that

neither their mother nor their father keeps track of how well the student is doing in school.

In regression analyses, this variable was rescaled and entered as a proportion.

Percent professional fathers (BB038)
Percent or proportion of sophomores or seniors in a school with fathers in professional occupations. "Professional" occupations include: "manager," "administrator" and "professional."

In regression analyses, this variable was rescaled and entered as a proportion.

Percent white collar fathers (BB038)
Percent or proportion of sophomores or seniors in a school with fathers in white collar occupations. "White collar" occupations include: "clerical," "proprietor or owner," "sales," "school teacher," "service," and "technical."

In regression analysis which included the percent of students with fathers in various occupations this category was excluded to avoid singularity.

Percent who cut class (BB059E)
Percent of sophomores or seniors in a school who said they cut class "every once in a while."

Percent who don't do assigned homework (BB015)
Percent of sophomores or seniors in a school who said they do not do assigned homework. Students who said they have no homework assigned were excluded from the base of this percent.

Percent who have been in serious trouble with the law (BB061A)
Percent of sophomores or seniors in a school who said they have been in serious trouble with the law.

Percent who have been suspended or put on probation (BB059A)
Percent of sophomores or seniors who indicated that they had "been suspended or put on probation in school."

Percent who have had disciplinary problems (BB059B)
Percent of sophomores or seniors in school who indicated that they "had disciplinary problems in school during the last year."

Survey absenteeism rate
Ratio (expressed as percent) of the number who did not participate in the survey minus the number who did not have a valid excuse, to the number sampled minus the number who did not have a valid excuse.

Student Level

Contextual Variables from Aggregated Student Reports

SOURCE: Student Questionnaire

NOTE: The following variables were calculated separately for each sophomore by aggregating reports of other sophomores in that student's school.

Class cutting--context (BB059E)
The percent of sophomores in a school, not including the student being modeled, who say they cut class "every once in a while."

Grades--context (BB007)
The average grades received by sophomores in a school, not including the student being modeled.

Before calculating the average, the grades received so far in high school were transformed using a transformation of ordinal variables as suggested by Mosteller and Tukey (1978). The categories were transformed as follows: "Mostly A's" was set to 3.29, "About half A's and half B's" was set to 1.53, and so forth, down to "mostly below D's" which was given the value -5.50.

Homework--context (BB015)
The average amount of homework done by sophomores in the school, not including the student being modeled.

The average was calculated by excluding students who reported that "no homework was ever assigned," and assigning other categories the value of the midpoint of the category.

Student Level

Individual Characteristics

SOURCE: Student Questionnaire and tests

Academic program (BB002)
Whether or not the student is in an academic program.

Both parents present (BB036B BB036C BB036D BB036E)
Whether or not both parents or guardians live with the student.

Cuts class (BB059E)
Whether or not the student reported cutting class "every once in a while."

Days absent (BB016)
The number of days the student reported being absent for reasons other than illness between the beginning of school and Christmas vacation during the academic year 1979-1980.

(a) In contingency tables, this variable was categoried as noted in the table headings.

(b) When group means were calculated, each category was assigned the value of the midpoint of the category.

Days late (BB017)
The number of days the student reported being late between the beginning of school and Christmas vacation during the academic year 1979-1980.

(a) In contingency tables, this variable was collapsed as noted in the table headings.

(b) When group means were calculated, each category was assigned the value of the midpoint of the category.

Doesn't do assigned homework (BB015)
Whether or not a student who has homework assigned reported that she or he does not do it.

In contingency tables, the base for percentages always excluded those students who reported that "no homework is ever assigned."

Early educational expectations (YB072A YB072B BB068A BB068B)
The sum of the number of years out of the previous four that a sophomore expected to go to college.

Educational cohort (GRADE)
Whether the student is a sophomore or senior.

Ethnicity (BB089 BB090)
(a) In contingency tables these variables were recoded to the following categories:

Black - non-Hispanic
Hispanic - both black and white
White and Other - white non-Hispanic, Asian, American Indian

(b) For regression analysis, dummy variables were created for these categories. "White and other" serves as the reference category in these cases.

Family income (BB101)
(a) In contingency tables, this variable was categorized as indicated in the table heading.

(b) When used as a continuous variable, each category was assigned the value of the midpoint of the category.

Father present (BB036B BB036C)
Whether or not the student's father or male guardian lives with him or her.

Father's education (BB039)
(a) In contingency tables this variable was categorized as indicated in the table headings.

(b) In regression analysis, values were assigned to the categories as indicated in the description of the school-level variable "Average father's education."

Father's occupation (BB038)
(a) This variable was recoded as follows:

Blue collar includes craftsman, laborer, military, operative, and protective service

White collar includes clerical, proprietor or owner, sales, school teacher, service, and technical

Professional includes manager, administrator, and professional

Farm includes farmer or farm manager

(b) In regression analysis, dummy variables were created for these categories. "White collar" serves as the reference category in these cases.

Grades (BB007)
The student's "grades so far in high school."

(a) In contingency tables, this variable was categorized as described in the table headings.

(b) In regression analysis, each category was assigned a value using a transformation of ordinal variables suggested by Mosteller and Tukey (1978). Values were assigned as follows: "Mostly A's" was set to 3.29, "about half A's and Half B's" was set to 1.53, and so forth, down to "mostly below D's" which was given the value -5.50.

Has been in serious trouble with the law (BB061A)
Whether or not a student has been "in serious trouble with the law."

Has been suspended or put on probation (BB059D)
Whether or not the student has been "suspended or put on probation in school."

Has had disciplinary problems (BB059B)
Whether or not the student has had "disciplinary problems in school during the last year."

Hours of homework (BB015)
The number of hours of homework a student reported doing every week. Each category was assigned the value of the midpoint of the category. Those with no assigned homework were excluded.

Math score
The number of correct answers a sophomore gave to items 2-6, 10-18, 20-22, and 24, on the sophomore mathematics tests.

Misbehavior scale (BB059E BB061A YB053F)
A scale in which 1 point was given for each of the following: cuts class "every once in a while," has been "in serious trouble with the law," is "very" much seen by fellow students as a troublemaker.

Mother present (BB036D BB036E
Whether or not the student's mother or female guardian lives with him or her.

Parents do not know (BB046C)
Student's parents do not "almost always know where I am and what I am doing."

Parents do not monitor (BB046A BB046B)
Neither student's father nor mother "keeps track of how well" the student is doing in school.

Present educational expectations (BB065)
"How far in school" the student thinks he or she will get. Categories were assigned values in the same way as for the school-level variable "Average education of father."

Seen as troublemaker (YB053F)
Whether student thinks he or she is seen as a troublemaker "very" much. Rating scale: very, somewhat, not at all.

Sex (BB083)

Verbal score
The number of correct answers a sophomore gave to items 1, 7, 10, 11, 13, 15, 18, and 21, on the sophomore vocabulary test.

APPENDIX B

EXAMINATION OF NONRESPONSE BIAS

As is true of any survey, the data from High School and Beyond have difficulties caused by the failure of some students to respond to every question. Approximately 16 percent of the sample did not participate in the survey at all. The lack of complete cooperation certainly introduces some bias into the study, the magnitude of which is difficult to assess. We carried out an exercise to approximate the size of the bias. It seemed likely that the strongest bias in the measurement of misbehavior might occur for the student reports of absenteeism since absenteeism should be correlated with survey nonresponse. The school questionnaire included a question about the average daily attendance in the high school. This item does not correspond exactly to the student reports, because the students were asked to exclude absenteeism that was due to illness, an important cause of absenteeism, while school administrators were not. If all schools had about the same amount of absenteeism due to illness, this lack of information would not be a problem, but such an assumption is, of course, unrealistic.

The lack of identical measures for schools and students makes the assessment of bias difficult. In order to get some sense of the effect of nonresponse on reports of school attendance by the school administrator when student reports were controlled for, we regressed "Average daily attendance" on the average number of days that sample sophomores and seniors were absent for reasons other than illness between the beginning of school and Christmas vacation in the academic year 1979-80 (Average days absent).[1] This model included the percent of students who were in the final sample but who did not participate in the survey (Survey absenteeism rate), and an interaction term between this variable and "Average days absent." We also included measures of school enrollment, the percentage of black and Hispanic students in the school, the percentage of sample sophomores who indicated that they planned to go to college, the log of the student-staff ratio, the type of school, and the region in which the school is located.

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[1] If we had known the number of days each school was in session before Christmas vacation, we would have used this information to construct the average daily percentage of students absent for reasons other than illness. Since we did not have this information, we simply used the average number of days missed for reasons other than illness, implicitly assuming that each school was in session for the same length of time. The effect of some of the independent variables may be partly due to their correlation with the number

The results of this analysis are presented in table B.1. It shows that only 27 percent of the variance in average daily absenteeism is explained by the model, and, further, that a number of variables besides the mean level of absenteeism of sophomores and seniors has an effect on the dependent variable. The effect of the percentage of students who participated in the survey is at the borderline of what is normally taken to be statistical significance. The results suggest, though, that the percentage of sample students who participated in the study is an independent predictor of the school's report of average daily attendence. The interaction term between the percentage who missed the survey and the amount of absenteeism not due to illness reported by students is in fact a slightly more important predictor than is the percentage who missed the survey. Moreover, its effect is positive, which suggests that the percent who missed the survey is a less powerful predictor of attendance as the average number of days missed for reasons other than illness is increased. It might be that in schools with very little absenteeism for reasons other than illness the percentage of students who missed the survey is a good measure of the average amount of illness in the school, and so is a predictor of average daily attendance. In

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of days the school was in session before Christmas vacation. We would not expect the percentage of students who were absent on survey day and the makeup day to be correlated in this way, however.

Table B.1--Regression coefficients for school administrator's report of average daily attendance, regressed on selected school and student body characteristics: Spring 1980[1]

Independent variables	Dependent variable	
	Average daily attendence	
	Coefficient	t-values
Intercept	104.37	27.6
Region:		
New England	-2.48	-2.7
Middle Atlantic	-1.22	-1.8
South Atlantic	-1.16	-1.7
East South Central	-0.30	-0.3
West South Central	-0.015	-0.0
East North Central	-0.17	-0.3
West North central	-0.38	-0.5
Mountain	-2.55	-3.0
Type of community:		
Urban	-2.40	-4.0
Suburban	-1.03	-2.5
Type of school:		
Catholic	1.06	1.4
Other private	-0.03	-0.0
Percent black	0.0011	0.1
Percent Hispanic	-0.047	-5.3
School enrollment	-0.000011	0.0
Student-staff ratio	-0.075	-12.1
Percent expecting college	0.21	2.1
Survey absenteeism rate	-0.73	-1.8
Average days absent[2]	-2.91	-3.2
Survey absenteeism x average days absent	0.19	1.9
R^2	.27	

NOTE: Variables are defined in appendix A. Table entries were calculated using school weights. The number of cases used in the calculations differs slightly from the total number of schools (988) due to item nonresponse. T-values have been corrected for item nonresponse as described in the technical note to chapter 1.

[1] Estimates were obtained using generalized least squares.

[2] Both sophomores and seniors were included when this variable was computed.

schools with more attendance not due to illness it may be that there is less variation in absenteeism due to illness, and so the useful information carried by the percentage who missed the survey is redundant. Alternatively, it might be that negative bias in reports of absence not due to illness is more common in schools with low self-reported attendence than in schools where it is high, and that in schools with very high average self-reported absenteeism the bias in this measure becomes positive. In brief, we can conclude that the percentage who missed the survey is an independent predictor of the school's average daily attendance. But, because the percentage who missed the survey is a measure of the average level of illness in a school as well as of the bias in the self-reports of absenteeism, we cannot draw firm conclusions from the results of this analysis.

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